

THE CHARACTERISTICS AND CULTURE OF  
SUSTAINABILITY AT COLLEGES AND  
UNIVERSITIES THAT EMPLOY FULL-TIME  
SUSTAINABILITY COORDINATORS

By

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## CHAPTER I

### INTRODUCTION

**1.1 Research Question:** What are the characteristics and culture of sustainability at colleges and universities that employ a full-time Sustainability Coordinator?

Sustainability Coordinators, sometimes referred to as “Sustainability Officer,” “Sustainability Manager,” “Director of Sustainability,” or several other titles with essentially the same fundamental job functions, have a unique position at a number of institutions of higher education in the United States and across the world. Many people see the significant benefit that the role of a Sustainability Coordinator can provide to an institution of higher education. Sustainability Coordinators increase efficiency in waste management, energy use reduction, coordination of groups, and the multitude of tasks that benefit an institution and their efforts toward sustainability. While seeing the benefit of such a position to an institution of higher education may be easy, developing the position can be much more difficult. There are a number of factors that will determine whether an institution of higher education will establish this position which include but are not limited to institutional culture, financial resources, and foreseen benefits.

This research seeks to develop information regarding the characteristics and culture of sustainability at institutions of higher education that have established a Sustainability Coordinator. The movement of establishing Sustainability Coordinators has been in existence for

more than thirty years, but has gained significant momentum in the last 5 years. The scope of this research is limited to four-year or greater, accredited colleges and universities within the United States.

## 1.2 Definition of Terms

There are a number of terms and acronyms that need to be defined in order to fully understand the context in which this research is conducted.

**Sustainability-** There are several ways to define “sustainability” in relation to the environment. The most general definition of the term memorized by environmental science students everywhere is: Meeting the needs of the present without compromising the needs of the future (World Commission on Environment and Development, 1987, p. 8). This specifically refers to the concept of “sustainable development” which is often times presented synonymously with “sustainability” itself. This is because “sustainable development” can broadly encompass everyday life functions. More advanced attempts to define sustainability have been made by a number of scholars. Fiorino (2010), in his article *Sustainability as a Conceptual Focus for Public Administration* explains sustainability in his statement:

The sustainability concept is not all-encompassing but also integrating because it requires that choices be made in the context of interrelationships and interaction among the three systems [Human Health and Well Being, Ecosystem Health, and Resource Sustainability]. Any issue that modern society faces, from the use of natural resources, to the regulation of financial institutions, to local zoning, to the pricing of water resources, to the relationship of economic factors, to the capacity for governance may be incorporated in the sustainable framework (p. 583).

It can be difficult to define “sustainability” because the concept can take on different meanings depending on the context. One description of the difficulty in defining sustainability is, “While

visionary statements, such as carbon neutrality, perhaps suggest a long-term answer to ‘What is Sustainable?’ the path towards a sustainable vision is dynamic and hard to define” (Rauch & Newman, 2009, p.107). For the purpose of this study, the definition of sustainability will primarily revolve around the concept presented by Emanuel (2011) when he stated “Put in simpler terms, sustainability is providing for the best for people and the environment in the present and in infinite future” (p.81).

**Campus Sustainability-** Campus sustainability has a slightly different definition than “sustainability” itself because college and university campuses have a unique make up that requires an individual definition as they are separate from society as a whole. The Campus Consortium for Environmental Excellence [c2e2] (2006) presents a comment on the evolution of the term “campus sustainability” when they state, “Historically, actions on campus to promote sustainability have largely centered on environmental efforts to green the campus. Increasingly, campuses are beginning to expand the definition to include economic, environmental, and social dimensions of their activities and operations” (p.7). Emanuel further references a definition for campus sustainability which is derived from The College Sustainability Report Card<sup>1</sup> in 2009, “The criteria for campus sustainability is organized into four categories: Ecological (food and recycling, green building, and transportation); Economic/Financial (endowment transparency and investing priorities); Institutional (administration, student involvement, and shareholder engagement); and Energetic (climate change and energy) (p. 82).

Essentially, the definition of campus sustainability encompasses all aspects of college and university functions. There are numerous examples which can attest that with proper nurturing of creativity, all aspects of an institution’s makeup can be operated in an environmentally sustainable manner thus enhancing its campus sustainability.

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<sup>1</sup> “The College Sustainability Report Card evaluates environmental sustainability efforts at 322 schools in the United States and Canada.” It evaluates campus operations and endowment investments (greenreportcard.com, 2010).

## **Sustainability Coordinator-**

One means of ensuring that goals are achieved is to appoint an individual who is responsible for coordinating sustainability efforts with the goal of improving environmental performance of the institution. This sustainability professional may be referred to as sustainability coordinator but may include other titles such as environmental coordinator, energy manager, etc (c2e2, p.7).<sup>2</sup>

A Sustainability Coordinator develops, coordinates, and administers programs and advises on policies within the areas of sustainability at a college or university. These roles include but are not limited to:

- Coordination within clubs, conferences, public events, seminars, and workshops
- Defining and executing goals for the university regarding sustainability expectations
- Act as a liaison between student groups, faculty, staff and upper-level administration regarding sustainability goals and initiatives
- Other duties as specified by the individual colleges and universities

In summary, the c2e2 organization provides a useful quote from Miller, "... the key role of the campus sustainability professional is to 'integrate the principles of sustainability into campus operations, planning, development, and academic programs and, in many ways, bridge the gap between the idealism of students and faculty and the pragmatism of staff and administration'" (p.10).

**Four-Year Accredited Institutions-** This research is limited to four-year institutions granting bachelor's or greater degrees. These institutions must be accredited by a nationally recognized

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<sup>2</sup> Note: For the purpose of this research, an "energy manager" does not qualify within the scope of this project.

accreditation entity. Community colleges and technical schools are not eligible for participation in this study.

**Association for the Advancement of Sustainability in Higher Education [AASHE]**- The mission of the AASHE organization is to “empower higher education to lead the sustainability transformation. We do this by providing resources, professional development, and a network of support to enable institutions of higher education to model and advance sustainability in everything they do, from governance and operations to education and research”(The Association for the Advancement of Sustainability in Higher Education, 2010).

**Association for the Advancement of Sustainability in Higher Education- Sustainability Tracking and Assessment Rating System [AASHE-STARS]**- a transparent, self-reporting framework for colleges and universities to gauge progress toward sustainability and be recognized for sustainability leadership. STARS is designed to provide a framework of understanding of sustainability in all sectors of education, enable meaningful comparisons across institutions using a common set of measurements. STARS creates incentives for continual improvement, and facilitates information sharing amongst institutions in regards to sustainability. The STARS program encompasses colleges and universities that include community colleges to research universities in the United States and Canada (Association for the Advancement of Sustainability in Higher Education, 2010)

**American College and University President’s Climate Commitment [ACUPCC]**-

Provides a framework and support for America’s colleges and universities to implement comprehensive plans in pursuit of climate neutrality. The Commitment recognizes the unique responsibility that institutions of higher education have as role models for their communities and in educating the people who will develop the social, economic and technological solutions to reverse global warming and help create a thriving, civil and

sustainable society (American College and University President's Climate Commitment, 2007).

**Carnegie Classification System-** The leading framework for recognizing and describing institutional diversity in U.S. higher education. This framework has been widely used in the study of higher education, both as a way to represent and control for institutional differences, and also in the design of research studies to ensure adequate representation of sampled institutions, students, or faculty (The Carnegie Foundation for Advancement in Teaching, n.d.).

### 1.3 Conceptual Framework

In the development of this research it is understood that each university has unique goals, missions, and resources. Colleges and universities will entertain the proposal of establishing a Sustainability Coordinator at their institution as their needs dictate because "The specification of a particular institution's value function will depend on the underlying preferences of many individuals including the institution's governing board, its administration, alumni and donors, faculty and students" (Stafford, 2010, p.3). The information provided in this research is intended to be a helpful tool for those colleges and universities that have yet to establish a Sustainability Coordinator or like position at their institution.

This research has developed data which supports conclusions on the characteristics and culture of sustainability at colleges and universities that have established Sustainability coordinators through two separate surveys and online data collection. The first survey was collected at the AASHE conference in October 2010. The second survey was conducted amongst solely sustainability coordinators at four-year accredited colleges and universities across the United States. The data collection of institutional characteristics was conducted through the Carnegie Classification System online database, the AASHE Sustainability Officers Directory,

and the individual university's websites. The concepts supporting the hypotheses are also supported by a literature review.

The data from Survey I is found in the "results" section and presented based on the most common data found in the survey. Survey II was analyzed through frequency tables, descriptive statistics, and correlations of the data. Tables and charts of the findings are provided in the results section with supplemental descriptions of the data.

## CHAPTER II

### OBJECTIVES AND REVIEW OF LITERATURE

#### 2.1 Objective 1: Trends in Institutional Characteristics

*This research seeks to develop information and make conclusions on trends of institutional characteristics in regards to their size, type, location, and residential status at institutions with Sustainability Coordinators within the scope of this research.*

The following are the metrics to determine those institutional characteristics most relevant to the establishment of Sustainability Coordinators at four-year or greater colleges and universities within the United States:

- Type of Institution
- Public vs. Private Institution
- Institution Size
- Institution Residential Status
- Geographic Location

#### 2.12 Type of Institution

An important institutional characteristic can be the type of college or university. The characteristics common of Liberal Arts universities could make those institutions more likely to employ Sustainability Coordinators. Some of these characteristics include "... liberal arts colleges

award the bachelor of arts degree, are residential, primarily enroll full-time students between 18 and 24 years of age, and limit the number of majors to roughly twenty to twenty-four fields in the arts, humanities, languages, social sciences, and physical sciences” (Breneman, 1994, p.12). It can be inferred that these characteristics could make Liberal Arts institutions more likely to establish a Sustainability Coordinator position than other types of institutions due to the nature of the university type. This can be supported in the statement,

Liberal Arts colleges typify what practitioners and scholars think of as the collegiate ideal: a relatively intimate family-like campus culture, full-time residential students, faculty who are committed working collaboratively with their students both inside and outside the classroom, and strong emphasis on fostering student’ involvement in both academic and social activities” (Pascarella et. al, 2005, p. xiii).

These characteristics parallel the concept of the Sustainability Coordinator and their role in student involvement/activism for sustainability initiatives at the university. It seems that it would be natural for Liberal Arts universities to nurture this concept.

Pascarella, Wolniak, Seifert, Cruce, and Blaich (2005) go on to conclude this concept in the statement, “Given that liberal arts colleges tend to be characterized by socially and psychologically supportive environments, one might conclude students at liberal arts colleges are more engaged in educational activities” (p.14). The characteristic of student involvement and activism and its affect on the establishment of Sustainability Coordinators at colleges and universities will be explored later in this research. However, it is important to note that the culture often typical of Liberal Arts colleges (as described above) is one that could be inferred as most likely to support the establishment of a Sustainability Coordinator. Sustainability Coordinators often thrive in institutional settings that focus on student involvement.

### 2.13 Public vs. Private Institutions

Whether or not a college or university is classified as public or private could be a predictor of their establishment of a Sustainability Coordinator. There are attributes of each type of institution that could make it more or less likely to establish this position.

*Private institutions* have unique characteristics that would support such a position. Astin (1977) contributes to this concept when he states “Attending a private institution greatly increases the student’s chances of interacting with faculty, participating in campus government, becoming familiar with instructors and becoming verbally aggressive in classes... most of these effects on satisfaction are attributable to the smaller size of private colleges” (as cited in Breneman, 1994, p. 6). Dorothy Finnegan (2002) supplements this idea when she states, “They offer a diversity of education experiences that is unparalleled in the world...an enduring cornucopia of opportunity, providing communities of serious discourse for individuals of virtually any political or social orientation” (p. 486). Private institutions may be more inclined to establish sustainability coordinators because of their ability to establish a greater level of interaction between students and faculty due to their smaller size. Intentional size can be a distinguishing characteristic of public and private colleges and universities. Typically private university populations are smaller than those of public colleges and universities.

There are a variety of differences between public and private universities but funding may be more of a grey area, “Although public universities are unique in the support they receive from direct state appropriations, private universities also receive substantial public support from both state and federal government in the form of research grants and contracts, private gifts...” (Duderstadt and Womack, 2003, p. 10). This may discredit any assumptions that private

universities are more or less financially capable of establishing a Sustainability Coordinator position.

The greatest distinction that may have a significant impact on the establishment of Sustainability Coordinators at a particular college or university is their "... legal status and governance. Public universities are creatures of the state, clearly owned by the taxpayers and governed by the public process" (Duderstadt and Womack, 2003, p.12). Some universities may have established a Sustainability Coordinator because the community of the institution demands this sort of action to promote sustainability and efficiency in sustainability programs within the higher education setting, and perhaps the community as a whole. Furthermore, colleges and universities provide an example to the community of "how social institutions, created by public policy and supported by public tax dollars, evolve in response to changing social needs" (Duderstadt and Womack, 2003, p. 6). Savitz and Weber (2006) make an interesting point when they state, "Sustainable companies find areas of mutual interest and ways to make "doing good" and "doing well" synonymous, thus avoiding the implied conflict between society and shareholders" (p. 18). However, "doing well," is likely measured by different metrics at the higher education level than those of the corporate level.

Both public and private colleges and universities have unique characteristics leading them to be more or less likely to establish a Sustainability Coordinator. It could be implied that as a whole, public colleges and universities may be more influenced by community demand for such a position. Conversely, private institutions may have more capability due to their form of governance. The same could be true for the rationales for not establishing the position.

#### 2.14 Institution Size

The size of an institution could have a significant impact on the establishment of a Sustainability Coordinator at a college or university. Smaller institutions may have a greater

ability to promote interaction with faculty and foster student ideas through a smaller student to faculty ratio. This may contribute to a smaller, possibly closer community setting. If the college or university has a strong commitment to sustainability, even small institutions could require and/or benefit from the establishment of a Sustainability Coordinator. Larger institutions may have more dispersion of their student driven sustainability projects. This could require a greater need for coordination and collaboration of those projects than necessary at smaller colleges and universities. Larger institutions may also have a greater need for waste and energy management, curriculum development, and overall sustainability coordination as a whole at the institution. While writing on factors that drive universities to embrace sustainability, Sarah Stafford (2010) stated that “larger universities are more likely to join as are facilities located in highly educated communities” (p. 3). Ultimately, there are a number of factors of why institution size could have a major impact on whether or not an institution chooses to establish a Sustainability Coordinator position.

## 2.15 Institution Residential Status

Lunardini (2002) describes the impact of living in residence halls on students at institutions of higher education. He explains that a certain culture develops between individuals living within proximity of each other. Lunardini states, “It is with those relationships that students confront and consider differing values, consider and regulate their behavior, and explore their futures as students and beyond” (p. 537). He advances to demonstrate, “By virtue of being on the campus, residents are more likely to be involved in it. Residents are more likely to use university facilities, to attend evening programs, to have relationships with faculty, and to become involved in organizations” (p. 537). The impact of residential status could positively affect whether or not a college or university establishes a Sustainability Coordinator. As student involvement and programming increases, so does the need for coordination of those programs.

This notion works under the assumption that some of the program development will include those programs that at least in some way focus on sustainability.

A high level of on-campus living increases the opportunity for sustainability promotion through residential life. Sustainability programs within the residence halls such as recycling and energy reduction projects create a greater need for a Sustainability Coordinator. This generates an opportunity to track cost savings and waste reduction, also providing a learning opportunity for the residents of the halls. For example, the University of Arizona has established a *Residence Life Recycling and Sustainability Program*. Their mission is

...dedicated to preserving the environment by facilitating an ongoing recycling program, in each residence hall... We provide education on recycling as well as environmental, social, and economic preservation. We enable students to become not only ecologically responsible, but also more responsible individuals through the use of programming and practices (The University of Arizona, n.d.).

## 2.16 Geographic Location of the Institution

The geographic location of each institution that employs a full-time Sustainability Coordinator meeting the criteria of this research was developed. The geographic location is important because certain trends could be identified in each region by comparing the individual characteristics previously listed to their most common location in the United States.

## 2.2 Objective 2: Institutional Culture

***This research seeks to develop information and make conclusions on the culture of sustainability at institutions that have established Sustainability Coordinators within the scope of this project.***

The level of strength of institutional culture which favors sustainable initiatives will be determined by the following metrics:

- Presidential Support for Sustainability Initiatives
- A Signatory of the ACUPCC
- Registration with the AASHE-STARs Program
- Donor Contributions for Sustainability Programs
- Strategies that Include Sustainability Advertising for the Recruitment of Students
- Student Body Activity in Sustainability Programs

In order to categorize levels of “Culture of Sustainability,” the following levels were established to associate the measure of “Culture of Sustainability.” The following describes said levels:

1-2 Characteristics- **Low** Culture of Sustainability

3-4 Characteristics- **Medium** Culture of Sustainability

5-6 Characteristics- **High** Culture of Sustainability

#### 2.21 Presidential Support

Presidential support for sustainability initiatives is an important aspect of institutional culture. “Institutions are shaped by the culture in which they develop, and the institutions themselves become the context for the development of particular institutional cultures” (Opitz and Guthrie, 2002, p.343). An institution that has a high level of presidential support for sustainability initiatives creates an atmosphere which is more comfortable for students and faculty to present topics for sustainable development within the academic setting. Of course, presidential support for sustainable initiatives does not imply a utopia of limitless inputs for sustainability programs. Resources, budgets, efficacy, and feasibility will always be a consideration to a president and upper-level administration, as it should be to the entire academic community. College and university presidents can show their support by signing the ACUPCC, frequently

speaking on their support for the enhancement of sustainability projects within their institution and community, and by nurturing ideas for sustainability through allocation of resources.

## 2.22 ACUPCC Signatories & AASHE-STARs Registrants

Whether or not the college or university is an ACUPCC signatory and/or AASHE-STARs registrant are variables which could represent the culture of the institution as well as their commitment to sustainability. These programs provide measureable metrics which gage sustainability. This is especially true because these programs dictate continual improvement efforts in order to participate. Being part of one or both of these programs makes a statement that the college or university intends to continually improve their practices in order to operate more sustainably. Dernbach (2009) states, “colleges and universities across the United States are increasingly practicing sustainability in campus operations with climate change serving as a catalyst for energy conservation projects, renewable energy purchasing, recycling, and sustainable food initiatives” (p. 93). ACUPCC and STARs are means of organizing and insuring these initiatives. Furthermore, “... campuses require methods of comparison to each other as well as to a vision of a ‘sustainable college or university’ to ensure that they are moving in the right direction” (Shriberg, 2002, p. 254). Through self assessment and comparison, colleges and universities are given the opportunity to evolve their sustainability programs, determining which inputs work best and which do not, “cross-institutional assessment tools identify sources of support and resistance for sustainability initiatives, which helps to lead to effective sustainability, policies, objectives, and programs” (Shriberg,2002, p. 255).

This research seeks to determine if those universities which have established Sustainability Coordinators are also participants of one or both of these programs. If a majority of those colleges and universities with Sustainability Coordinators are participants of either of these programs, this may assist in leading to some conclusions that a sustainable culture of a

college or university may influence the establishment of a Sustainability Coordinator.

Participating in these programs also affirms the commitment of upper-level administration to sustainability. As Dernbach (2009) states, “Signing presidential commitments like American College and University President’s Climate Commitment is an important way to signal this support since it integrates sustainability with strategic planning” (p. 104).

### 2.23 Donor Contributions for Sustainability Programs

Colleges and universities no matter their size, type, public, or private depend greatly on contributions to a variety of programs from private sources. If a college or university has an entity outside of grants and state support such as a private donor contributing to their sustainability practices, they will experience a significant advantage in enhancing those practices. Funding resources at the majority of colleges and universities are scarce, especially in the past few years due to the economic collapse. Having funds specifically allocated to sustainability programs could pave the way for promoting sustainability at the institution. This also makes a statement on the priorities of the community and the directions that they wish for the college or university to go.

### 2.24 Sustainability as a Student Recruitment Strategy

As sustainability and “going green” increases in popularity, it is reasonable that a college or university that exhibits a culture of sustainability would use this as a strategy for the recruitment of students. This is not to be taken in a negative manner which suggests that universities are seeking to capitalize on the latest “green movement.” Rather, many institutions are highlighting the focus of their institution to recruit individuals who seek to contribute to the mission of the university. Nonetheless, using an institution’s sustainability focus as a means of recruitment *does* indicate that the university must have some level of “culture of sustainability” in order to advertise such to potential students. Stafford (2010) illustrates this concept when she

states, “Because IHEs [Institutions of Higher Education] compete for students, student preferences should have an effect on campus sustainability efforts just as consumer preferences affect corporate practices” (p. 9).

Furthermore, students who choose to focus on sustainability/environmental studies may be seeking out universities that not only provide courses on sustainability, but maintain it as a major focus. A reputation for sustainability focus could be very desirable to many students and “students may be willing to pay a higher tuition if the campus is environmentally sustainable” (Stafford, 2010, p. 2). Therefore, not only is using sustainability as a recruitment strategy beneficial to the institution, but also a benefit to students seeking a sustainably focused education.

## 2.25 Student Body Activism

A major question that arises in regards to sustainability in higher education is: “How active are the students?” Students can be a significant driving factor in developing initiatives of any type at an institution. Students frequently form grass roots organizations and utilize their resources and creativity in order for their voice to be heard. Sustainability initiatives are not an exception to this concept, “student environmental activism has risen dramatically since 2002, and students are often the major drivers of sustainability on their campuses” (Dernbach, 2009, p. 98). Student involvement and activism can range from small groups doing local service projects to organizations such as Student Environmental Action Coalition [SEAC] which is a “student run national network of progressive organizations and individuals whose aim is to uproot environmental injustices through education and action” (Student Environmental Action Coalition, n.d.).

Emanuel (2011) conducted a study on the students’ perceptions of campus sustainability. He surveyed students from Hawaii and Alabama (the fourth and 48<sup>th</sup> “greenest states” respectively according to a Forbes article in 2007). Emanuel found in his study that “the majority

of the respondents agreed or strongly agreed that the university should make sustainability a priority in campus planning, development, and day to day operations” (p.87).

Most students can agree that sustainability should be a priority for colleges and universities, but there are varying levels of commitment from the students to engage said sustainability prioritization. Some institutions have sustainability programs in which only a few students bear the weight of their operation. Other institutions experience extreme levels of student participation from a student base which is broad in their interests and backgrounds. There are a number of cases where students have even taken the initiative to develop funding for sustainability projects at their institutions. For example, at the University of Missouri, the existing Solid Waste and Recycling Coordinator position was enhanced to a Sustainability Coordinator position. According to Amanda Wysocki (2009), “The position was created as a part of the new sustainability fee established by a student referendum in February” (p.1). The development of this fee does not pay for the entire position as “most of the money to fund the position would come from the existing solid waste and recycling funds, but the sustainability fee would supplement it” (p.1). In another example, Utah State University also recently approved “a student-proposed \$3 per-semester fee that will create an office of sustainability on its Logan campus and fund projects geared toward conserving resources” (Maffly, 2011, p.1). These types of fees are becoming more and more common and show that students not only want to see sustainability at their campuses, but they are also willing to pay for it.

Moreover, top-down student engagement and support can be an important component of an institution’s attempt to embrace student activism in Sustainability Programs. Developing a Sustainability Coordinator provides an opportunity for upper-level administration to demonstrate student support by providing an avenue for students to collaborate their ideas. Typically, a major component of the Sustainability Coordinator’s roles is to “Connect with and support the academic mission by engaging students and faculty in the environmental and social performance of the

institution, and by using the campus as a living laboratory” (c2e2, 10). Having a campus culture which supports students and the evolution of their ideas for sustainability will likely be commonly reported response amongst colleges and universities that have established a Sustainability Coordinator position.

## CHAPTER III

### METHODOLOGY

#### 3.1 Survey I

In October 2010, the AASHE organization held their annual national conference in Denver, Colorado. There were approximately two-thousand representatives of sustainability from a variety of colleges and universities across the United States, Canada, and Australia. A 2-part survey with open-ended questions was given to people at random during workshops at the conference (see Appendix 1). Part 1 of the survey was for participants to fill out if their institution had a Sustainability Coordinator. Part 2 of the survey was for those participants who did *not* have a Sustainability Coordinator at their institution. Participants were typically students, faculty, staff, administration, or the Sustainability Coordinator representing their particular institution. Some participants chose to take the survey with them and send them to the researcher at a later date.

The data from countries outside of the United States were not included in the results of the surveys because they were outside of the scope of this research. Community colleges and other universities that did not meet the criteria of the definition of “four-year accredited universities” as defined by this research *were* included because the results made up a significant proportion of those surveyed in Survey I. Due to the nature of the participant selection, there was no way of determining which type of college or universities that the individual was representing

within the amount of time allowed for discussion. The answers to Survey I provided valuable insights on how to appropriately create the questions for Survey II.

### 3.2 Database Information of Institutional Characteristics

Some institutional characteristics were available through on-line resources such as [aashe.org](http://aashe.org), [carnegiefoundation.org](http://carnegiefoundation.org), [presidentsclimatecommitment.org](http://presidentsclimatecommitment.org), and the individual institutions' official websites. The following information was derived from the aforementioned resources:

- Institution Size<sup>3</sup>
  - Classified into:
    - **Very Small Four-Year (VS4)**- Fall enrollment data show FTE<sup>4</sup> enrollment of fewer than 1,000 degree-seeking students at these bachelor's degree granting institutions.
    - **Small Four-Year (S4)**- Fall enrollment data show FTE enrollment of 1,000-2,999 degree-seeking students at these bachelor's degree granting institutions.
    - **Medium Four-Year (M4)**- Fall enrollment data show FTE enrollment of 3,000-9,999 degree-seeking students at these bachelor's degree granting institutions.
    - **Large Four-Year (L4)**- Fall enrollment data show FTE enrollment of at least 10,000 degree-seeking students at the bachelor's degree granting institutions.
- Institution Type<sup>5</sup>

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<sup>3</sup> Classifications and descriptions for institution size were obtained from The Carnegie Foundation for the Advancement of Teaching "Classification Description" reference. Retrieved from: [classifications.carnegiefoundation.org/descriptions/size\\_setting.php](http://classifications.carnegiefoundation.org/descriptions/size_setting.php).

<sup>4</sup> "FTE: Full-time equivalent enrollment was calculated as full-time plus one-third part-time"

<sup>5</sup> Classification descriptions produced by The Carnegie Foundation for the Advancement of Teaching (1994)

- Classified into:
  - **Liberal Arts-** Primarily undergraduate colleges which award more than 40 percent of their baccalaureate degrees in Liberal Arts fields and are restrictive in their admissions.
  - **Research Institution-** Institutions which offer a full range of baccalaureate programs. They are also allotted significant amounts of federal support .Colleges and Universities that are classified as “Masters” or “Doctorate” institutions as listed by the Carnegie Foundation are included in this category for the purpose of this research.
  - **Other** – This section is designated for “specialized” institutions which do not fully meet the criteria for either “Liberal Arts” or “Research” colleges or universities. Examples of these types of institutions include: medical schools and centers, theological seminaries (and other schools solely offering degrees in religion), schools of business and management, and schools of art, music, and design.
- Residential Status<sup>6</sup>
  - Classified into:
    - **Non Residential (NR)-** Fewer than 25 percent of degree-seeking undergraduates live on campus<sup>7</sup> and/or fewer than 50 percent attend full time.
    - **Primarily Residential (R)-** 25-49 percent of degree-seeking undergraduates live on campus and at least 50 percent attend full time.

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<sup>6</sup> Classifications and descriptions of institution residential status were obtained from The Carnegie Foundation for the Advancement of Teaching “Classification Description” reference. Retrieved from: [classifications.carnegiefoundation.org/descriptions/size\\_setting.php](http://classifications.carnegiefoundation.org/descriptions/size_setting.php).

<sup>7</sup> “On Campus is defined as institutionally-owned,-controlled, or –affiliated housing.” Retrieved from: [classifications.carnegiefoundation.org/descriptions/size\\_setting.php](http://classifications.carnegiefoundation.org/descriptions/size_setting.php).

- **Highly Residential (HR)**- At least half of degree-seeking undergraduates live on campus and at least 80 percent attend full time.
- Private or Public Institution
- Geographic Location of the Institution<sup>8</sup>.
  - The geographic location of each institution was developed and then categorized by its appropriate region of the United States as determined by the United States Census Bureau. Regions include:
    - West
    - Midwest
    - Northeast
    - South
- ACUPCC Signatory- A list of those institutions that are signatories of this commitment are available on the program’s website. The list of signatories was compared to the list of institutions that employ full-time sustainability coordinator and qualify within the scope of this research.
- AASHE STARS Registrant- A list of those institutions that have registered for or completed the requirements of the AASHE-STARs program was developed. This information was compared to the list of Sustainability Coordinators whose institutions qualify within the scope of this research.

### 3.3 Survey II

A list of 178 full-time Sustainability Coordinators from four-year accredited colleges and universities in the United States was developed. This list was generated from three different

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<sup>8</sup> A map of the regions of the United States as determined by the United States Census Bureau can be found at [www.census.gov/geo/www/us\\_regdiv.pdf](http://www.census.gov/geo/www/us_regdiv.pdf)

sources. First, the list was generated from the AASHE Sustainability Officer Directory<sup>9</sup> which reports on

Paid, sustainability/environmental coordinators, directors, officers, and managers in the U.S. and Canada. Positions focused largely on waste reduction and recycling or environmental compliance are not included. In cases where multiple people at an institution meet these criteria, only one is listed. 'Full-time' position is defined as those that entail 30 hours or more per week (AASHE Directory, n.d.,1).

The AASHE Sustainability Officer directory was then evaluated and those sustainability officers who did not meet the requirements of this research were removed from the list. The most common reasons for removing a sustainability officer were those at the community colleges and those outside of the United States.

Next, Sustainability Coordinators that were not represented in the AASHE Directory were added to the list. These additions came from those represented in the first survey and meet the criteria of being full-time and at a four-year accredited university. Furthermore, their name, position, and contact information was confirmed through the university website.

Finally, through research of a variety of universities websites, additional Sustainability Coordinators were added to the list. These Sustainability Coordinators were added because it was found that their role at the university and the university itself met the criteria of this research. Undoubtedly there are likely some Sustainability Coordinators at colleges and universities within the United States that did not make this or the AASHE directory list. This research has made every attempt to insure those missing from the list are minimal.

Survey II was sent via email to all 178 full-time Sustainability Coordinators. The survey was not in the same open-ended format as Survey I (see Appendix 2). Structured answers were

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<sup>9</sup> You must be a member of the AASHE organization in order to gain access to this directory.

presented based on the most common answers from the first survey. Participants were asked to check answers that applied to their institution. Participants were also asked to rank their answers on two questions. Participants were given the opportunity to make comments about some questions within the survey. However, their comments were purely for supplemental and explanatory purposes. Comments did not change how their answers were analyzed.

Conducting a second round of surveys (Survey II) was important for two reasons.

- 1) Participants in Survey I gave valuable insights to the status of the Sustainability Coordinator at their institution based on their experience. However, because participants were randomly selected (based on convenience) not all participants were particularly qualified to produce factual answers to the questions. As a result, Survey II was only conducted amongst those persons currently acting as the Sustainability Coordinator at the college or university.
- 2) Survey I was conducted through open-ended questions which allowed participants to comment freely. As a result of the comments, it provided an opportunity to produce a close-ended Survey II with provided answers. These answers were derived from the most common responses reported in Survey I. This allowed Survey II to ask the most relevant questions and eliminate those that were not pertinent to the study.

## CHAPTER IV

### RESULTS

#### 4.1 Survey I Results

**Table 1: Frequency Distribution of Survey I Respondents: Institutional Characteristics**

	<b>Number of Participants</b>	<b>Number of States</b>	<b>Public</b>	<b>Private</b>
Those institutions with Sustainability Coordinators	68	26	51	17
Those institutions <i>without</i> Sustainability Coordinators	39	20	26	15
<b>Total</b>	<b>107</b>	<b>33*</b>	<b>77</b>	<b>32</b>

\* 32 states + the District of Columbia. Total is 33 because some states were duplicated between those institutions with Sustainability Coordinators and those without.

Surveys were conducted and collected at the AASHE conference. Of those surveys, 107 colleges and universities were represented from 33 states (including the District of Columbia) across the United States. Colleges and Universities from outside of the United States were eliminated from the survey sample. Private Institutions made up 30 percent (32/107) of the participant institutions. Meanwhile, 70 percent (77/107) of the participant institutions were Public. A chi-squared analysis was conducted for the Table 1 data. It was found that Table 1 has three degrees of freedom and the distribution is insignificant.

Table 2: Survey I- (Part 1) Institutions with Sustainability Coordinators – Most Common Responses

Characteristic	Most Common Responses
Salary Range	\$40K-\$60K
Supervision	Vice President Facilities
Position Establishment	2008 2009
Obstacles in Position Establishment	Funding
Cost Reduction	Yes
Student Engagement	Yes
Benefits of Position	Increased campus Sustainability Collaboration

The most common responses from Survey I are meaningful because they helped determine which questions to ask in Survey II. The greatest majority of participants who were able to comment reported that the Sustainability Coordinator at their institution earned a salary of \$40,000-\$60,000. The position most often reports to either a Vice President at the institution or works within the facilities department. Most often the position was established in either 2008 or 2009, which combined represented 44 percent of those reported. In regards to obstacles in establishing the position, 48 participants were able to comment on this question. Of those who were able to comment, 34 of the 48 (71 percent) reported “funding” as an obstacle in establishing the position. Participants were asked if establishment of the position had yielded cost savings for the university (presumed through energy reduction). There were 54 participants able to comment on this question and 32 of the 54 (59 percent) reported that establishing the position had created cost savings for the university. All 68 participants commented on the question regarding the position and interaction with the student body. The majority of the participants, 58 of the 68 (85 percent) reported that the Sustainability Coordinator worked with the student body as a part of

their job requirement. When asked to list some of the benefits of the position, 62 participants were able to comment on this question. The most frequent benefit reported was “Increased Campus Sustainability Collaboration<sup>10</sup>” represented by 65 percent of responses. “Raising Awareness” was reported by 29 percent of participants, followed closely by “Focusing Key Values of the University” with 25 percent, “Helps University Focus towards Master Plans” with 18 percent, and finally miscellaneous benefits were listed by 15 percent of respondents. Participants were not limited in the number of benefits they reported. Finally, Participants were asked if their “Green Report Card” score had increased since the establishment of the Sustainability Coordinator at their institution. The majority of participants either did not know the answer, or their particular institution was not a participant in the program. Thus, the question over the Green Report Card was eliminated from the results of Survey I. This information was also taken into consideration when developing Survey II. As a result of comments and further research of this question, it was determined that the AASHE STARS program was a more relevant source from which to derive data for this research.

As this project has evolved, it has been determined that the result from those institutions *without* Sustainability Coordinators from Survey I were unable to contribute to the scope of this study. See Appendix 3 for the most common answers to Part 2 of Survey I.

#### 4.2 Database Information and Characteristics of All Colleges and Universities with Sustainability Coordinators

Section 3.2 provides the description for categorizing each of the following variables.

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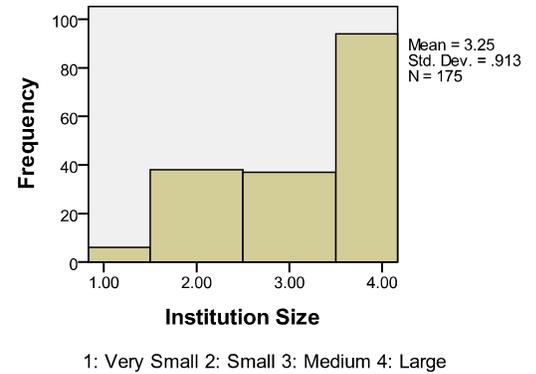
<sup>10</sup> “Increased Campus Sustainability Collaboration” refers to actions performed by the Sustainability Coordinator which allow for the collaboration of sustainability programs at the institution. This creates an atmosphere where groups are working together on initiatives as opposed to meeting the needs of their individual initiatives (which, in fact, could parallel those of other groups).

## Distribution of Institutions with Sustainability Coordinators by Size

**Table 3: Frequency Distribution of Institutions with Sustainability**

Size Classification		Frequency	Percent	Cumulative Percent
Valid	Very Small	6	3.4	3.4
	Small	38	21.3	25.1
	Medium	37	20.8	46.3
	Large	94	52.8	100.0
	Total	175	98.3	
Missing	.00	3	1.7	
Total		178	100.0	

**Figure 1: Frequency Distribution of Institutions with Sustainability Coordinators: Institution Size**



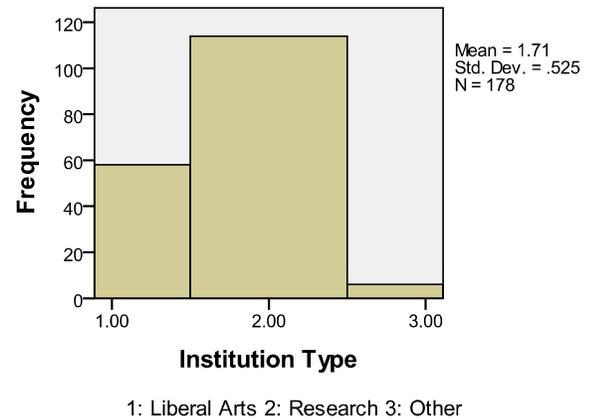
As described in section 3.2, many institutional characteristics were collected from a variety of on-line data bases. “Institution Size” was the only characteristic which yielded “missing” results due to the unique nature of a few institutions such as their status as a medical school. The literature review covered topics which provided potential reasons why both large and small institutions would likely have Sustainability Coordinators. The information in Table 3 concludes that those institutions within the scope of this research are most frequently large representing 52.8 percent.

## Distribution of Institutions with Sustainability Coordinators by Type

**Table 4: Frequency Distribution of Institutions with Sustainability**

Type		Frequency	Percent	Cumulative Percent
Valid	Liberal Arts	58	32.6	32.6
	Research	114	64.0	96.6
	Other	6	3.4	100.0
Total		178	100.0	

**Figure 2: Frequency Distribution of Institutions with Sustainability Coordinators: Institution Type**



Data for each Institution Type was collected. Research institutions represented the significant majority of institutions at 64 percent with Sustainability Coordinators. These results do not agree with the information provided in the literature review. This could be due to the fact that there are more Research institutions in the United States than there are Liberal Arts institutions.

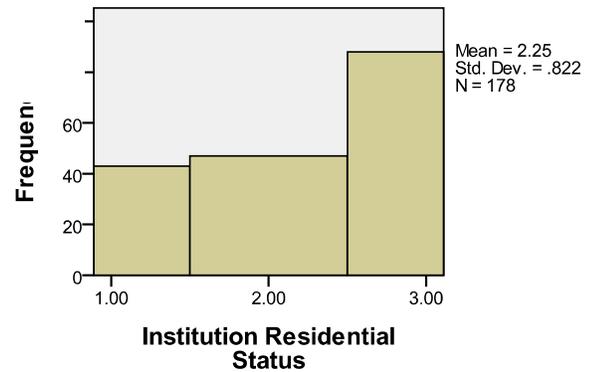
**Distribution of Institutions with Sustainability Coordinators by**

**Residential Status-**

**Table 5: Frequency Distribution of Institutions with Sustainability Coordinators: Institution Residential Status**

Residential Status	Frequency	Percent	Cumulative Percent
Valid Non-Residential	43	24.2	24.2
Residential	47	26.4	50.6
Highly Residential	88	49.4	100.0
Total	178	100.0	

**Figure 3: Frequency Distribution of Institutions with Sustainability Coordinators: Institution Residential ...**



1: Non-residential 2: Residential 3: Highly Residential

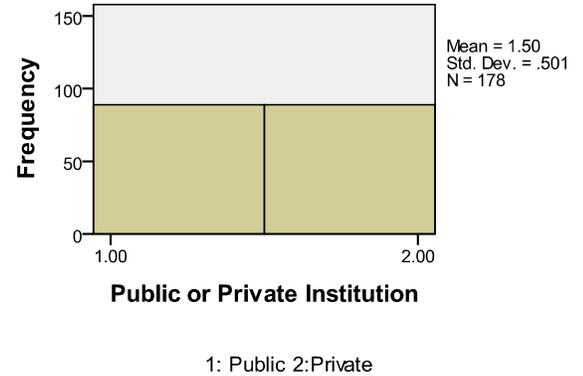
Institutional Residential Status data was collected and frequency distribution tables were produced. It was found that the majority of institutions that employed a full-time Sustainability Coordinator were at “Highly Residential” institutions representing 49.4 percent (88/178) of institutions with Sustainability Coordinators. These results parallel the information provided in the literature review. It was expected that “Residential” or “Highly Residential” institutions would be more common amongst the institutions with Sustainability Coordinators because these institutions often times have more programs that require coordination, more student involvement, and larger facilities which include housing than institutions that are “Non-residential.”

## Distribution of Institutions with Sustainability Coordinators by Public or Private Status

**Table 6: Frequency Distribution of Institutions with Sustainability**

Coordinators: Public or Private Institution				
Public or Private		Frequency	Percent	Cumulative Percent
Valid	Public	89	50.0	50.0
	Private	89	50.0	100.0
Total		178	100.0	

**Figure 4: Frequency Distribution of Institutions with Sustainability Coordinators: Public or Private Institution**



The status of “public” or “private” institution was evaluated and it was found that there is no significance in this characteristic. It was found that exactly 50 percent of each category was represented by both public and private institutions that employ a full-time Sustainability Coordinator. The literature review provides information which details why public or private institutions would have individual reasons for establishing a Sustainability Coordinator due to their typical make-up. Typically, public institutions are larger in size and may have more programs and facilities which require coordination. On the other hand, private institutions are often smaller in size and may provide an opportunity for students and faculty to assert their interests and innovations at the institution. Because of this smaller community, private institutions may be more willing to establish a Sustainability Coordinator. As each type of institution has their own individual circumstances for establishing a Sustainability Coordinator, it is interesting that the results for this variable were 50/50 for both public and private institutions.

## Geographic Location of Institutions with Sustainability Coordinators

Figure 5: Map of Regions and Divisions by US Census Bureau

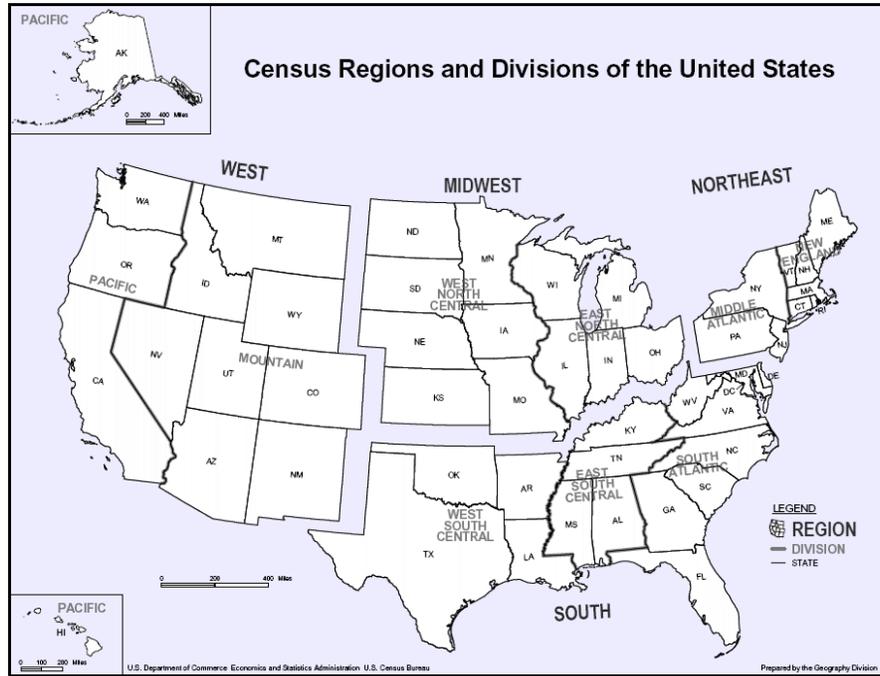
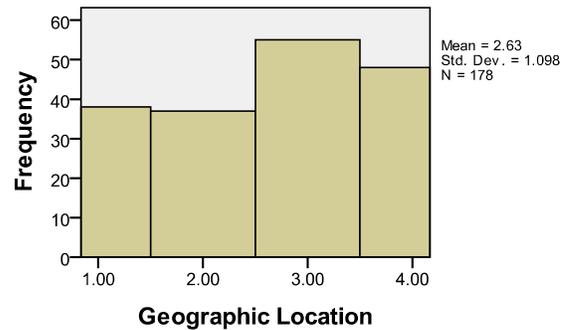


Table 7: Frequency Distribution of Institutions with Sustainability

Coordinators: Geographic Location				
		Frequency	Percent	Cumulative Percent
Valid	West	38	21.3	21.3
	Midwest	37	20.8	42.1
	Northeast	55	30.9	73.0
	South	48	27.0	100.0
	Total	178	100.0	

Figure 6: Frequency Distribution of Institutions with Sustainability Coordinators: Geographic Location



1: West 2:Midwest 3: Northeast 4: South

The geographic location of each institution was obtained and divided into regions as categorized by the United States Census Bureau (see Figure 5). There was not a large amount of variability between the regions. The Northeast exhibited the greatest number of employed Sustainability Coordinators representing 30.9 percent. The Midwest had the fewest Sustainability Coordinators at 20.8 percent.

## Comparison of Characteristics of All Institutions with Sustainability Coordinators

In order to develop a method of comparing the institutional characteristic variables, a cross tabulation was created by geographic region. These cross tabulations compare geographic region to institution size, institution type, public or private, and institution residential status. A standard chi-squared frequency analysis was calculated to determine whether the number of institutions in the cells of the following tables were significantly different from that indicated by the row and column totals. This information provides data that may clarify trends across the United States.

**Table 8: Cross Tabulation Comparing Geographic Region to Institution Size Amongst Institutions with Sustainability Coordinators**

Geographic Region	Missing	VS	S	M	L	Grand Total
1-West		1	4	11	22	38
2- Midwest		1	10	3	23	37
3- Northeast	2	3	15	15	20	55
4- South	1	1	9	8	29	48
<b>Grand Total</b>	<b>3</b>	<b>6</b>	<b>38</b>	<b>37</b>	<b>94</b>	<b>178</b>

Missing= Missing data

VS= Very Small

M= Medium

L= Large

Based on Table 8, the Midwestern region of the United States is characterized by the majority of their institutions being in the “Large” category at 62.2 percent (23/37). However, the South holds the majority (31 percent) of the “Large” institutions. The Northeast has more “Small” and “Very Small” institutions than any other region. However, a standard chi-squared frequency analysis indicates the chi-squared value of 17.03 with 12 degrees of freedom was not significant at the 10 percent level. That is, the distribution of colleges and universities within the cells of Table 8 is not significantly different than that implied by the row and column totals.

**Table 9: Cross Tabulation Comparing Geographic Region to Institution Type Amongst Institutions with Sustainability Coordinators**

<b>Geographic Region</b>	<b>Liberal Arts</b>	<b>Research</b>	<b>Other</b>	<b>Grand Total</b>
1- West	8	29	1	38
2- Midwest	11	25	1	37
3- Northeast	26	27	2	55
4- South	13	33	2	48
<b>Grand Total</b>	<b>58</b>	<b>114</b>	<b>6</b>	<b>178</b>

According to Table 9, Liberal Arts institutions are most common in the Northeast region of the United States representing 45 percent (26/58) of the Liberal Arts institutions and 47 percent (26/55) of the Northeastern institutions. Research institutions are most common in the South representing 69 percent (33/44) of the institutions in the South and 29 percent (33/114) of all of the research institutions with Sustainability Coordinators. The “other” category is only represented minimally in each region<sup>11</sup>. A chi-squared frequency analysis on the cells in Table 9 with six degrees of freedom with the chi-squared value of 8.99 was not significant at the ten percent level. That is given the row and column totals in Table 9, the distribution of institutions that have established Sustainability Coordinators Geographic Region are not significantly different than their expected values.

**Table 10: Cross Tabulation Comparing Geographic Region to Public or Private Status at the Institutions Amongst Those with Sustainability Coordinators**

<b>Row Labels</b>	<b>Public</b>	<b>Private</b>	<b>Grand Total</b>
1-West	24	14	38
2- Midwest	22	15	37
3- Northeast	15	40	55
4- South	28	20	48
<b>Grand Total</b>	<b>89</b>	<b>89</b>	<b>178</b>

<sup>11</sup> Reference section 3.2 for a description of the “other” category for Institution Type.

The majority of public institutions reside in the South with 32 percent (28/89) of the public institutions. The West has the greatest percentage of public institutions with 63 percent of the institutions in the west versus 37 percent of private institutions in the West. The Northeast contains the greatest percentage of private institutions as well as the majority of the total number of private institutions representing 73 percent and 45 percent respectively. A chi-squared frequency analysis was conducted and it was found that the data for Table 10 is significant at the .005 level with three degrees of freedom and a chi-squared value of 16.65. The distribution of institutions with Sustainability Coordinators' geographic region and their status of Public or Private is significant. Specifically, there are more Private institutions in the Northeastern region than expected and more Public institutions in the Western region than expected.

**Table 11: Cross Tabulation Comparing Geographic Region to Institution Residential Status Amongst Institutions with Sustainability Coordinators**

<b>Row Labels</b>	<b>Non-Residential</b>	<b>Residential</b>	<b>Highly Residential</b>	<b>Grand Total</b>
1- West	16	11	11	38
2- Midwest	8	16	13	37
3- Northeast	8	3	44	55
4- South	11	17	20	48
<b>Grand Total</b>	<b>43</b>	<b>47</b>	<b>88</b>	<b>178</b>

The significant majority of Northeastern institutions with Sustainability Coordinators qualify for the “Highly Residential” status at 80 percent (44/55) of the institutions in the Northeast. The Northeast also contains 50 percent (44/88) of all institutions categorized as “Highly Residential.” The majority of institutions in the West are categorized as “Non-residential” at 42 percent (16/38). A chi-squared analysis for Table 11 with six degrees of freedom and a chi-squared value of 37.72 which was found to be significant at the .005 level. The frequency of “Highly Residential” institutions in the Northeastern region was greater than expected. Furthermore, the frequency of “Non-residential” institutions in the Western region was higher than expected.

## **Objective 1: Discussion**

### Summary of Most Common Characteristics of All College and Universities with Sustainability Coordinators

**Institution Size-** Large- 52.8 percent

**Institution Type-** Research- 64 percent

**Residential Status-** Highly Residential- 49.4 percent

**Public or Private Institution-** 50 percent for each

**Geographic Location-** Northeast (highest) – 30 percent; Midwest (lowest) - 20.8 percent

In summary, there are some characteristics that show a distinct majority, while others do not. The majority of institutions with Sustainability Coordinators within the scope of this project fall into the categories of Large, Research type, and Highly Residential. Although having any of these characteristics separately is not necessarily indicative of having all three of the characteristics. The variables of Public or Private Institution and Geographic Location are more evenly distributed. Within the scope of this study, there was absolutely no variability between Public or Private Institution. Geographic Location had a relatively even distribution with the greatest percentage for a region being 30 percent in the Northeast. Conversely, the lowest percentage for a region was as high as 20.8 percent in the Midwest.

After reading this information, one may ask, “What are the characteristics of the ‘typical’ institution that has established a Sustainability Coordinator in the United States?” The answer is that within the scope of this research, the most common characteristics of institutions with Sustainability Coordinators are those that are large in size, are research based, are highly residential, and it is undeterminable whether or not they are public or private.

### Summary of Most Common Characteristics by Region:

**West-** Large, Research, Public, Non-residential Institutions

**Midwest-** Large, Research, Public, Residential Institutions

**Northeast-** Large, Split Research and Liberal Arts, Private, Highly Residential Institutions

**South-** Large, Research, Public, Highly Residential Institutions

There are some interesting distinctions if each variable is broken up by region. The “Large” category of institution size is dominant in every region. All of the regions have a strong frequency of Research Institutions, but in the Northeast the difference in the number of Research Institutions and Liberal Arts Institutions is minimal, with 26 Liberal Arts and 27 Research institutions. In every region, Public institutions are dominant except in the Northeast which is characterized by Private institutions. When looking at the variable of “Institution Residential Status,” it is clear that “Highly Residential” is the leader. However, when split across the four different regions, Institution Residential Status has a more even distribution, except in the Western region where “Non-Residential” institutions dominate.

In general, these findings parallel the concepts presented in the literature review. Due to increased student involvement that is often typical of residential and highly residential institutions, a Sustainability Coordinator position could be merited to coordinate programming. The Western region of the United States is the only region that was found to fall outside of this assumed trend by containing a majority of non-residential institutions that have established Sustainability Coordinators.

#### 4.3 Survey II Results

Survey II was sent via email to all 178 Sustainability Coordinators that qualified within the scope of this research. A total of 88 surveys were returned and provided the data for the subsequent subjects. These 88 sets of responses represent 49.4 percent of the total Sustainability Coordinators qualified to participate in this study. While the entire population of 178 institutions was surveyed, the results from the 49.4 percent respondents are treated as being random and results are summarized with standard “t-tests”.

#### 4.31 Culture of Sustainability

Based on the criteria described in section 2.2 of this paper, each institution will be assigned a level for “Culture of Sustainability” which will be ranked “low,” “medium,” or “high.” The following provides the data obtained from Survey II (as well as some on-line data collection for the signatories of the ACUPCC and registrants of the AASHE STARS program) on the “Culture of Sustainability” at the institutions that responded to the survey. There are seven items included in the characteristic “Culture of Sustainability”. The value of the “Culture of Sustainability” for each school is given as a simple sum of the “yes” responses. The hypothesis that colleges and universities in the United States that have a Sustainability Coordinators also have a “Culture of Sustainability” will be whether the mean sum of the “yes” responses is significantly greater than the expected mean.

#### Presidential Support-

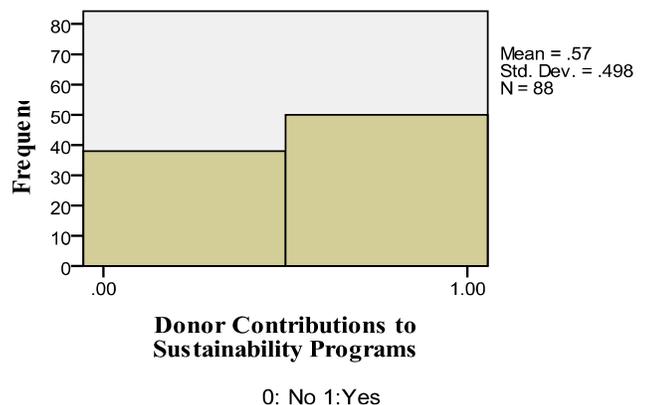
A college or university president who regularly expresses support for sustainability programs can positively affect the culture of sustainability at an institution. It did not come as a surprise that 100 percent of the respondents of Survey II reported that their institution’s president is “supportive of sustainability programs.”

#### Donor Contributions to Sustainability Programs-

**Table 12: Frequency Distribution of Survey II Respondents:  
Donor Contributions to Sustainability Programs**

Response	Frequency	Percent	Cumulative Percent
No	38	43.2	43.2
yes	50	56.8	100.0
Total	88	100.0	

**Figure 7: Frequency Distribution of Survey II Respondents:  
Donor Contributions to Sustainability Programs**



More than half (56.8 percent) of the institutions that have established a Sustainability Coordinator reported that donors contributed to sustainability programs at the institution. In order to reduce the sampling error, a Finite Population Correction Factor (fpc) was conducted. A 95 percent confidence interval was established for each variable<sup>12</sup>. The 95percent confidence interval for the proportion of all 178 institutions that had donors contributing to sustainability programs was determined to be between 41.9 percent and 71.7 percent. “Donor contributions to sustainability programs” is one of the variables within the culture of sustainability as defined by this research. It is significant that the majority of institutions that responded to Survey II have contributions to their sustainability programs.

**Strategy for recruitment of students-**

**Table 13: Frequency Distribution of Survey II Respondents:  
Uses Sustainability Practices for Recruitment of Students**

Response	Frequency	Percent	Cumulative Percent
No	16	18.2	18.2
Yes	72	81.8	100.0
Total	88	100.0	

Participants were asked: “Is being a ‘green’ or ‘sustainable’ university a source of advertising or recruitment for the university?” A significant majority of respondents, 81.8percent reported “yes” to this question. A 95 percent confidence interval for the mean of all 178 institutions has a range of 79.5 percent-87.7 percent was established. Since this range is above 50 percent in can be concluded that a minimum of approximately 80 percent of all 178 institutions with Sustainability Coordinators use sustainability as a strategy to recruit students.

<sup>12</sup> The form of the 95 percent confidence interval for a mean  $\bar{x}$  from 88 observations is  $\bar{x} \pm 2 \cdot S/\sqrt{n} \cdot fpc$ , where  $\bar{x}$  is the sample mean, S is the estimated standard deviation, 2 is the critical value of t for .95 and 88 degrees for freedom, and fpc is the finite population correction factor for small samples.

## ACUPCC Signatory-

**Table 14: Frequency Distribution of Survey II**

**Respondents: Signatory of ACUPCC**

Response	Frequency	Percent	Cumulative Percent
No	30	34.1	34.1
Yes	58	65.9	100.0
Total	88	100.0	

Of those surveyed, 65.9 percent of the institutions are signatories of the ACUPCC. A 95 percent confidence interval places the mean number of all 178 institutions with sustainability coordinators as being between 58.7 percent and 73.2 percent. It is significant that the majority of institutions that responded to Survey II are signatories of the ACUPCC.

## AASHE-STARS Registrant-

**Table 15: Frequency Distribution of Survey II**

**Respondents: AASHE-STARS Registrant**

Response	Frequency	Percent	Cumulative Percent
No	43	48.9	48.9
Yes	45	51.1	100.0
Total	88	100.0	

Of the survey respondents, 51.1 percent of the institutions are registrants of the AASHE-STARS program<sup>13</sup>. A 95 percent confidence was established for the mean number of signatories between 43.5 percent and 58.7 percent for all institutions that have established a Sustainability Coordinator position.

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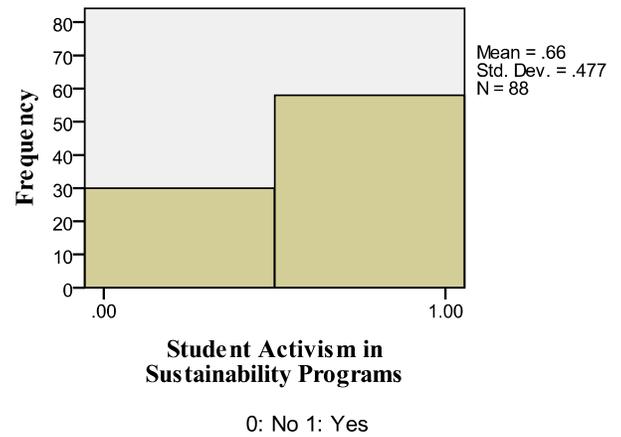
<sup>13</sup> See Appendix 4 to review tables which display the data for ACUPCC signatories and AASHE-STARS registrants from all 178 institutions with Sustainability Coordinators.

**Student body activism in sustainability programs-**

**Table 16: Frequency Distribution of Survey II**  
**Respondents: Student Activism in Sustainability Programs**

Response	Frequency	Percent	Cumulative Percent
No	30	34.1	34.1
Yes	58	65.9	100.0
Total	88	100.0	

**Figure 8: Frequency Distribution of Survey II Respondents: Student Activism in Sustainability Programs**



Participants were asked whether or not the student body is “highly active” in sustainability programs at the institution. It was reported that 65.9 percent of institutions that employed a Sustainability Coordinator had students that were “highly active” in sustainability programs. See section 2.25 for examples of sustainability programs at the higher education level. A 95 percent confidence interval concluded the range for the distribution of student activism in sustainability programs amongst institutions with Sustainability Coordinators to be 58.7 percent-73.2 percent.

## Summary of Culture of Sustainability

**Table 17: Culture of Sustainability: Correlations between Factors Related to Institutional Culture of Sustainability by Survey II Respondents**

Culture of Sustainability Variables		Donor Contributions	Student Activism	Recruitment of Students	Signatory of ACUPCC	AASHE-STARs Registrant
Donor Contributions	Pearson Correlation	1	.456**	.494**	.019	.134
	Sig. (2-tailed)		.000	.000	.862	.212
	N	88	88	88	88	88
Student Activism	Pearson Correlation	.456**	1	.469**	.039	.160
	Sig. (2-tailed)	.000		.000	.718	.136
	N	88	88	88	88	88
Recruitment of Students	Pearson Correlation	.494**	.469**	1	.096	.070
	Sig. (2-tailed)	.000	.000		.373	.519
	N	88	88	88	88	88
Signatory of ACUPCC	Pearson Correlation	.019	.039	.096	1	-.032
	Sig. (2-tailed)	.862	.718	.373		.770
	N	88	88	88	88	88
AASHE-STARs Registrant	Pearson Correlation	.134	.160	.070	-.032	1
	Sig. (2-tailed)	.212	.136	.519	.770	
	N	88	88	88	88	88

\*\* Correlation is significant at the 0.01 level (2-tailed).

Table 17 displays the correlations for the variables which fall under “Culture of Sustainability.” The majority of the variables are positively correlated with the exception of “Signatory of ACUPCC” and “AASHE-STARs Registrant” which negatively correlate (though not significantly) at the -.032 level. “Donor Contributions to Sustainability Programs,” “Student Activism in Sustainability Programs” and “Uses Sustainability Programs for Recruitment of Students” are all variables that are significantly correlated to each other. “Donor Contributions” is correlated to “Student Activism” at the .456 level, and to “Recruitment of Students” at the .494 level. “Student Activism” and “Recruitment of Students” are correlated to each other at the .469 level.

## Objective 2 Summary-

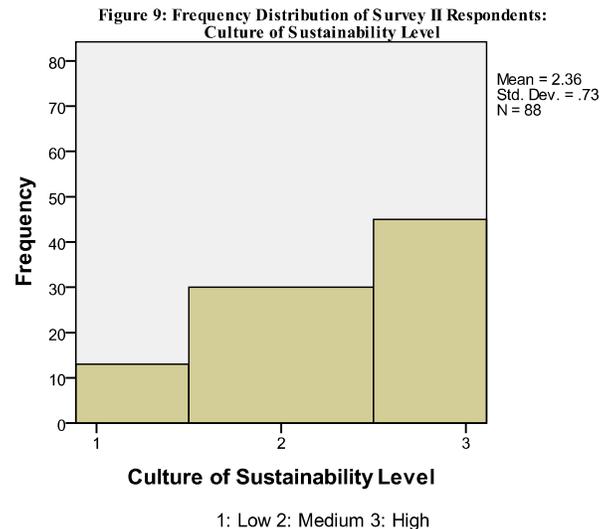
Objective 2 is: “This research seeks to develop information and make conclusions on the culture of sustainability at institutions that have established Sustainability Coordinators within the scope of this project.”

As described previously, “Culture of Sustainability” was categorized into three levels. Level 1 was designated as “low” culture of sustainability; Level 2 was designated as “medium” culture of sustainability; and Level 3 was designated as “high” culture of sustainability.

**Table 18: Frequency Distribution of Survey II Respondents:**

Culture of Sustainability Level			
Level	Frequency	Percent	Cumulative Percent
Low	13	14.8	14.8
Medium	30	34.1	48.9
High	45	51.1	100.0
Total	88	100.0	

The majority of survey participants qualified for a “high” culture of sustainability representing 51.1percent. A “medium” culture of sustainability followed at 34.1percent. Finally, a “low” culture of sustainability represented 14.8percent of those who participated in Survey II.



Based on the respondents of Survey II (shown in Table 18 and Figure 9) it is appropriate to conclude that institutions that have established a Sustainability Coordinator

do indeed have a certain culture of sustainability. The majority of four-year accredited institutions expressed a “high” level for culture of sustainability. However, in order to truly test culture of sustainability leading to the establishment of a Sustainability Coordinator, one would need to evaluate an equal sample of institutions that do not have a Sustainability Coordinator. One would then need to determine if institutions express the same level and frequency of culture of sustainability despite the lack of Sustainability Coordinator, to ensure that the variables are related. Ultimately, this research has sought to determine if the institutional culture is strongly in favor of sustainable programs. This research can firmly conclude that within the scope of this research, institutions with Sustainability Coordinators at four-year, accredited institutions in the United States do indeed have an institutional culture that is strongly in favor of sustainability programs.

#### 4.4 Further Discussion of Survey II Data

In addition to developing the data to supplement the hypotheses for this research, Survey II asked questions which lead to conclusion on the nature of the position itself. However, this data, within the scope of *this* research, is not being used to make any type of predictions about the position, but rather to provide current reports on the status of this position<sup>14</sup>.

##### 4.4.1 Motivators in Developing a Sustainability Coordinator Position

In order to understand the priorities of their motivations in establishing the position, participants were asked to rank each motivator (ranked 1-6) for relevance in establishing the position. See Appendix 2, Question 2 for the provided list of motivators which the

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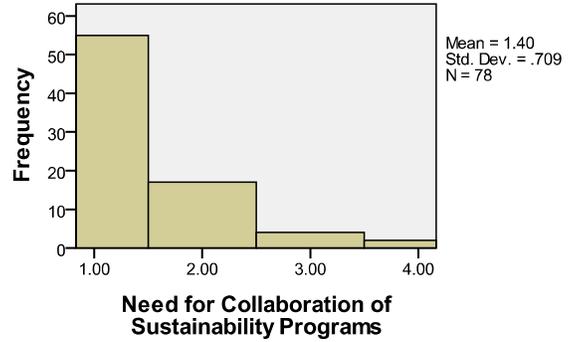
<sup>14</sup> For more information on the nature of this position, consult the *Hiring Education Sustainability Staffing Survey* conducted by the AASHE organization. The resource can be found at [www.aashe.org/publications/survey](http://www.aashe.org/publications/survey). This resource includes Community Colleges as well as institutions outside the United States.

participants ranked.

**Table 19: Frequency Distribution of Survey II Participants: Need for Collaboration of Sustainability Programs**

Ranking	Frequency	Percent	Valid Percent	Cumulative Percent
.00	10	11.4	11.4	11.4
1.00	55	62.5	62.5	73.9
2.00	17	19.3	19.3	93.2
3.00	4	4.5	4.5	97.7
4.00	2	2.3	2.3	100.0
Total	88	100.0	100.0	

**Figure 10: Frequency Distribution of Survey II Respondents: Need for Collaboration of Sustainability Programs**

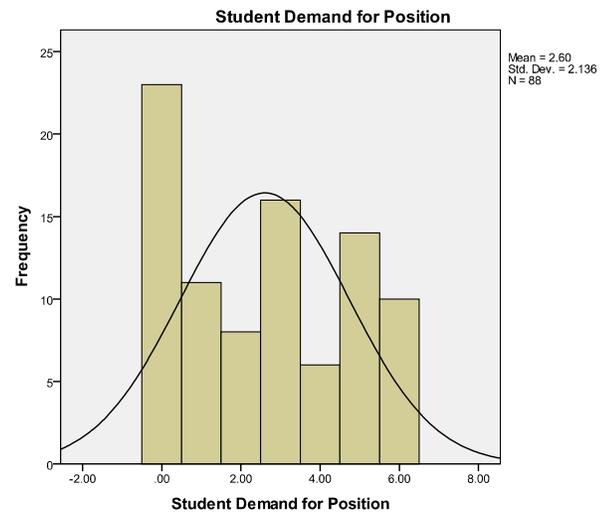


The “Need for Collaboration of Sustainability Programs” was the motivator most frequently ranked number 1. This motivator represented 62.5 percent ranked as number 1, distantly followed by a rank of number 2 by 19.3 percent of respondents. 11.4 percent of respondents chose not to answer this question.

**Table 20: Frequency Distribution of Rankings of Survey II Respondents: Student Demand for Position**

Ranking	Frequency	Percent	Valid Percent	Cumulative Percent
.00	23	26.1	26.1	26.1
1.00	11	12.5	12.5	38.6
2.00	8	9.1	9.1	47.7
3.00	16	18.2	18.2	65.9
4.00	6	6.8	6.8	72.7
5.00	14	15.9	15.9	88.6
6.00	10	11.4	11.4	100.0
Total	88	100.0	100.0	

**Figure 11: Frequency Distribution of Rankings of Survey II Respondents: Student Demand for Position**

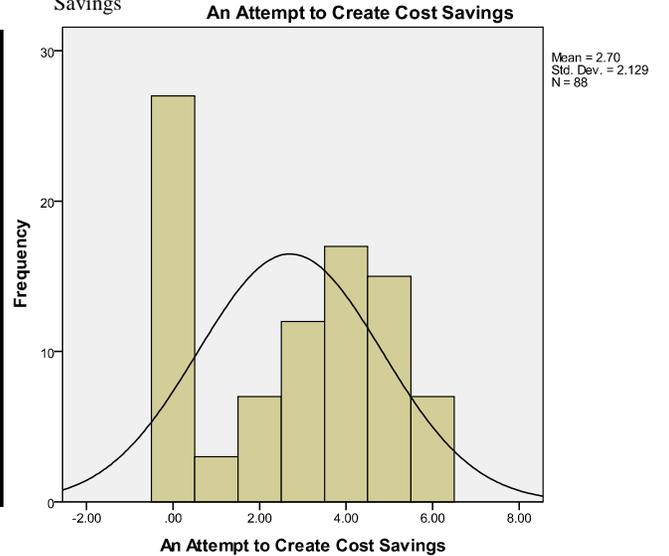


Participants most frequently ranked “Student Demand for the Position” as third most significant (18.2 percent) motivator in developing the Sustainability Coordinator position. This motivator is also frequently ranked fifth amongst 15.9 percent of participants.

**Table 21: Frequency Distribution of Rankings from Survey II**  
**Respondents: An Attempt to Create Cost Savings**

Ranking	Frequency	Percent	Valid Percent	Cumulative Percent
.00	27	30.7	30.7	30.7
1.00	3	3.4	3.4	34.1
2.00	7	8.0	8.0	42.0
3.00	12	13.6	13.6	55.7
4.00	17	19.3	19.3	75.0
5.00	15	17.0	17.0	92.0
6.00	7	8.0	8.0	100.0
Total	88	100.0	100.0	

Figure 12: Frequency Distribution of Rankings from Survey II Respondents: An Attempt to Create Cost Savings



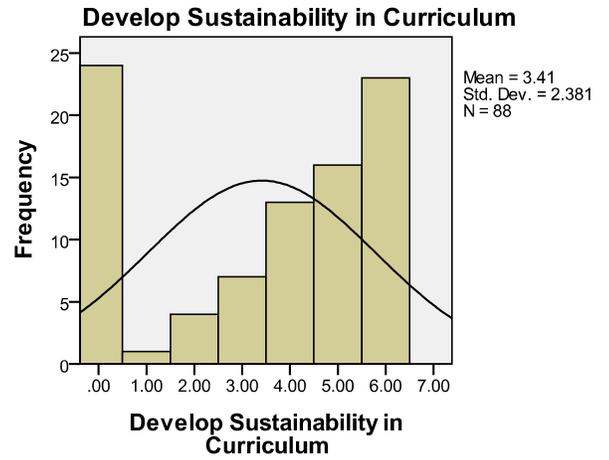
Participants most frequently ranked “An Attempt to Create Cost Savings” as the fourth motivator in developing the Sustainability Coordinator position at 19.3 percent. This motivator was also ranked at fifth by 17 percent of participants.

**Table 22: Frequency Distribution of Rankings from Survey II**

**Respondents: Develop Sustainability in Curriculum**

Ranking	Frequency	Percent	Valid Percent	Cumulative Percent
.00	24	27.3	27.3	27.3
1.00	1	1.1	1.1	28.4
2.00	4	4.5	4.5	33.0
3.00	7	8.0	8.0	40.9
4.00	13	14.8	14.8	55.7
5.00	16	18.2	18.2	73.9
6.00	23	26.1	26.1	100.0
Total	88	100.0	100.0	

**Figure 13: Frequency Distribution of Rankings from Survey II Respondents: Develop Sustainability in Curriculum**



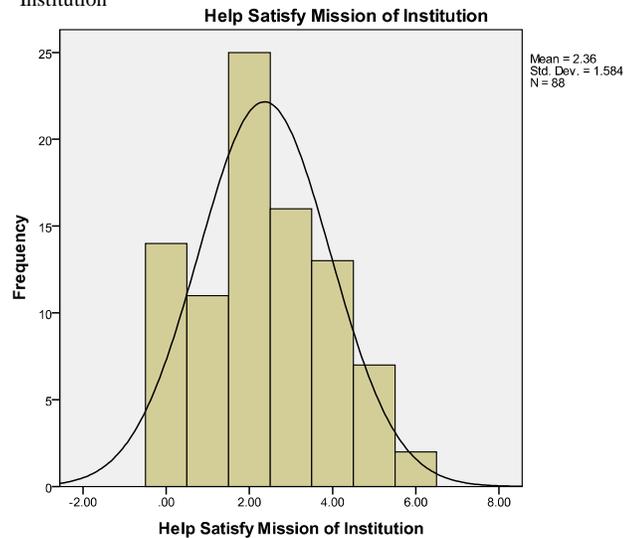
“Developing Sustainability in Curriculum” was ranked as the sixth most significant motivator in establishing the Sustainability Coordinator position by 26.1 percent of participants.

**Table 23: Frequency Distribution of Rankings from Survey II**

**Respondents: Help Satisfy Mission of Institution**

Ranking	Frequency	Percent	Valid Percent	Cumulative Percent
.00	14	15.9	15.9	15.9
1.00	11	12.5	12.5	28.4
2.00	25	28.4	28.4	56.8
3.00	16	18.2	18.2	75.0
4.00	13	14.8	14.8	89.8
5.00	7	8.0	8.0	97.7
6.00	2	2.3	2.3	100.0
Total	88	100.0	100.0	

**Figure 14: Frequency Distribution of Rankings From Survey II Respondents: Help Satisfy Mission of Institution**

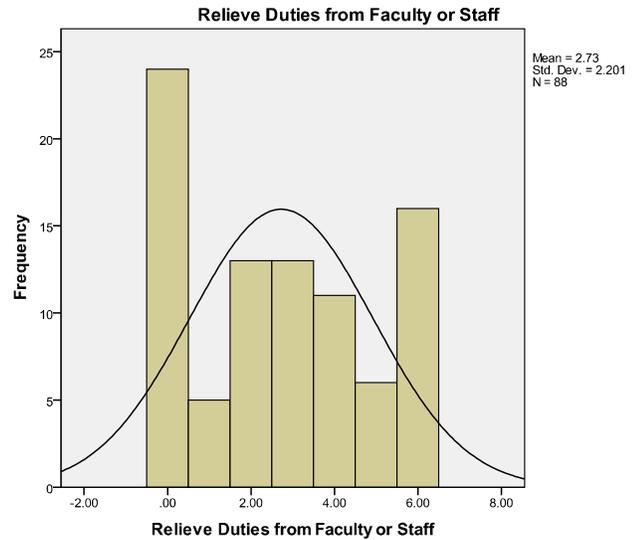


Participants ranked the motivator in establishing the Sustainability Coordinator position of “Help Satisfy the Mission of the Institution” most frequently as the second most significant at 28.4 percent.

**Table 24: Frequency Distribution of Rankings from Survey II**  
**Resondents: Relieve Duties from Faculty or Staff**

Ranking	Frequency	Percent	Valid Percent	Cumulative Percent
.00	24	27.3	27.3	27.3
1.00	5	5.7	5.7	33.0
2.00	13	14.8	14.8	47.7
3.00	13	14.8	14.8	62.5
4.00	11	12.5	12.5	75.0
5.00	6	6.8	6.8	81.8
6.00	16	18.2	18.2	100.0
Total	88	100.0	100.0	

Figure 15: Frequency Distribution of Rankings from Survey II Respondents: Relieve Duties from Faculty or Staff



Participants ranked the motivator in establishing a Sustainability Coordinator of “Relieve Duties from Faculty or Staff” most frequently as sixth as ranked by 18.2 percent of participants.

Note: This ranking is unexpectedly low because several comments on Survey I indicated that their need to establish a Sustainability Coordinator was in order to lighten the work load of many faculty and staff who had the essential job functions of a Sustainability Coordinator added to their already full work load. For this reason, there are a number of institutions which have faculty members servings as the acting Sustainability Coordinator as 25 percent of their job description. However, because they are not serving the position full-time, those individuals were not included within the scope of this study outside of the voluntary commentary included by select participants of Survey I.

**Table 25: Summary Table of Position Motivator Rankings by Survey II Respondents**

<b>Motivating Reason</b>	<b>\RANK</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>rbar.j</b>
Collaboration of Sustainability Programs		53	22	2	2	0	9	1.88
Student Demand		15	8	14	8	12	31	3.99
Cost Savings		3	6	19	18	13	29	4.35
Curriculum Development		2	2	5	11	20	48	5.15
Focus Institution Mission		9	26	16	13	6	18	3.40
Faculty Relief of Duties		4	11	13	11	10	39	4.51

Table 25 provides a collaboration of the frequency tables presented for the rankings from Survey II respondents on the motivators for establishing the Sustainability Coordinator position. Each option is shown with its frequency of rankings. A Friedman test for multivariate rankings was used to determine if the rankings were random. The respective means of each of the motivating reasons were. The Friedman test tells whether there are differences in the overall ranks but does not indicate which specific mean rankings are different. (Corder and Foreman, 2009, p. 95). It was found that there are significant differences in the rankings at the .010 level with a chi-squared value of 15.086, but it was not determined which rankings. . There are obvious distinctions in the variables of “Collaboration of Sustainability Programs,” which is frequently ranked as the highest motivator, and “Curriculum Development” which is frequently ranked as the least important motivator.

#### 4.42 Reported Roles of the Position:

The participants were asked to rank the roles (or tasks) the Sustainability Coordinator performs at their institution. The survey provided eight options which the participants ranked (1-8). See Appendix 2, Part II, Question 3 for the full list of Role of the Sustainability Coordinator.

The responses that were provided on the survey were derived from the most frequently reported responses from Survey I.

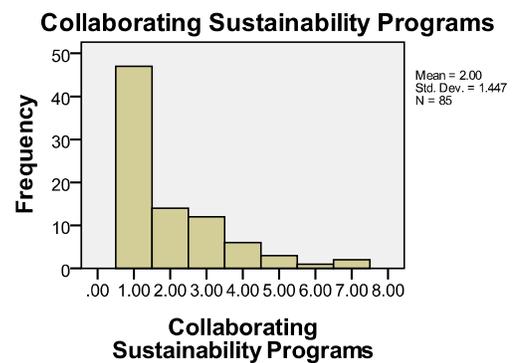
### Ranking of Duties of the Sustainability Coordinator

**Table 26: Frequency Distribution of Rankings from Survey II**

**Respondents: Collaborating Sustainability Programs**

Ranking	Frequency	Percent	Valid Percent	Cumulative Percent
.00	3	3.4	3.4	3.4
1.00	47	53.4	53.4	56.8
2.00	14	15.9	15.9	72.7
3.00	12	13.6	13.6	86.4
4.00	6	6.8	6.8	93.2
5.00	3	3.4	3.4	96.6
6.00	1	1.1	1.1	97.7
7.00	2	2.3	2.3	100.0
Total	88	100.0	100.0	

**Figure 16: Frequency Distribution of Survey II Respondents: Job Duty: Collaborating Sustainability Programs**

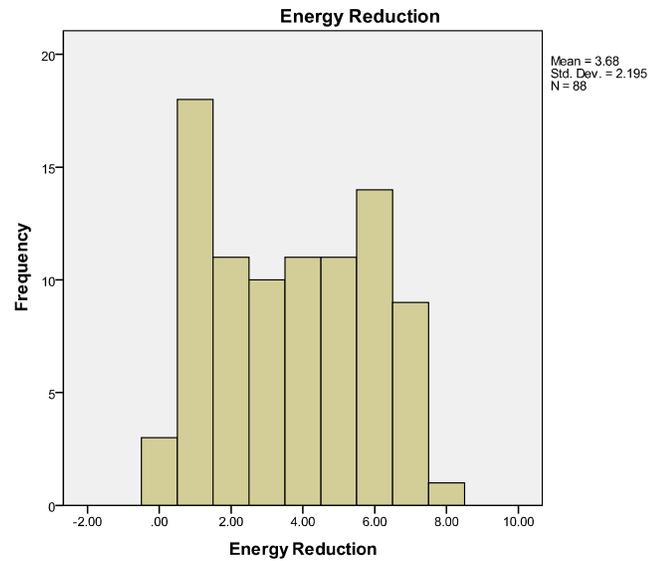


“Collaborating Sustainability Programs” is shown to be a major component of job duties as reported by 53.4 percent of respondents who ranked it as the number 1 job duty. Collaboration of programs is essential to this job position, not only because it is in the title, but because of the nature of the position itself. A Sustainability Coordinator is not only a person to execute specific job duties, but also a resource for students and staff to utilize in order to progress their goals for sustainability at the institution. Due to this collaboration of sustainability programs, so provides an excellent opportunity for efficiency amongst those programs for the institution.

**Table 27: Frequency Distribution of Rankings from Survey II**

Respondents: Energy Reduction				
Ranking	Frequency	Percent	Valid Percent	Cumulative Percent
.00	3	3.4	3.4	3.4
1.00	18	20.5	20.5	23.9
2.00	11	12.5	12.5	36.4
3.00	10	11.4	11.4	47.7
4.00	11	12.5	12.5	60.2
5.00	11	12.5	12.5	72.7
6.00	14	15.9	15.9	88.6
7.00	9	10.2	10.2	98.9
8.00	1	1.1	1.1	100.0
Total	88	100.0	100.0	

**Figure 17: Frequency Distribution of Rankings from Survey II Respondents: Energy Reduction**



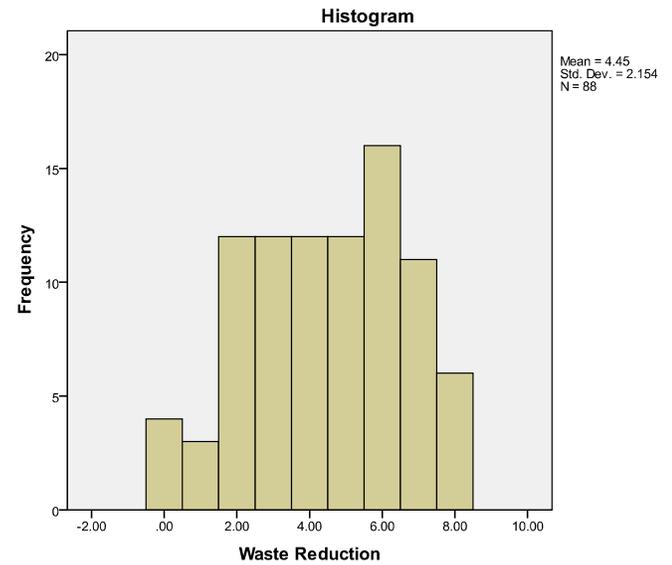
Participants ranked “Energy Reduction” as the number one most significant job role at 20.5 percent of the institutions. However, energy reduction was ranked between second and seventh in importance by 10 to 15 percent of the respondents. A greater percentage of participants ranked “Collaborating Sustainability Programs” as the number one most significant job role represented by 53.4 percent.

**Table 28: Frequency Distribution of Rankings from Survey II**

**Respondents: Waste Reduction**

Ranking	Frequency	Percent	Valid Percent	Cumulative Percent
.00	4	4.5	4.5	4.5
1.00	3	3.4	3.4	8.0
2.00	12	13.6	13.6	21.6
3.00	12	13.6	13.6	35.2
4.00	12	13.6	13.6	48.9
5.00	12	13.6	13.6	62.5
6.00	16	18.2	18.2	80.7
7.00	11	12.5	12.5	93.2
8.00	6	6.8	6.8	100.0
Total	88	100.0	100.0	

Figure 18: Frequency Distribution of Rankings from Survey II Respondents: Waste Reduction



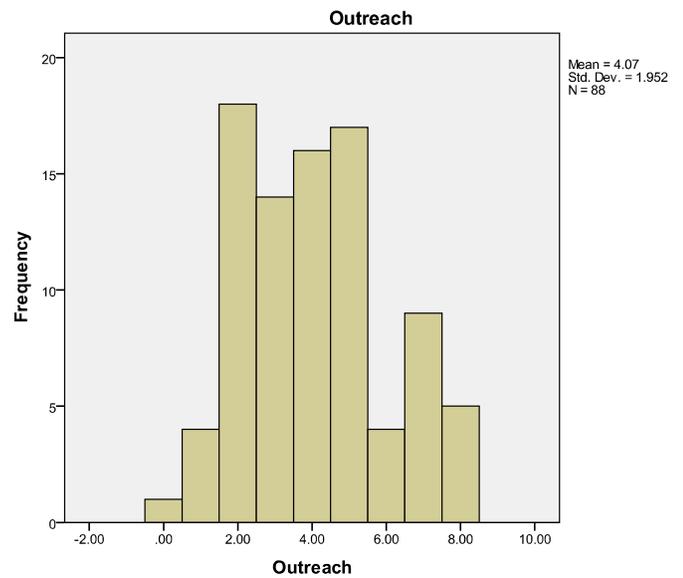
The job role of “Waste Reduction” was ranked by Survey II respondents most frequently as sixth most significant at 18.2 percent but 12 to 13 percent of the institutions ranked the role as second to fifth and seventh in importance.

**Table 29: Frequency Distribution of Rankings from Survey II**

**Respondents: Outreach**

Ranking	Frequency	Percent	Valid Percent	Cumulative Percent
.00	1	1.1	1.1	1.1
1.00	4	4.5	4.5	5.7
2.00	18	20.5	20.5	26.1
3.00	14	15.9	15.9	42.0
4.00	16	18.2	18.2	60.2
5.00	17	19.3	19.3	79.5
6.00	4	4.5	4.5	84.1
7.00	9	10.2	10.2	94.3
8.00	5	5.7	5.7	100.0
Total	88	100.0	100.0	

Figure 19: Frequency Distribution of Rankings from Survey II Respondents: Outreach

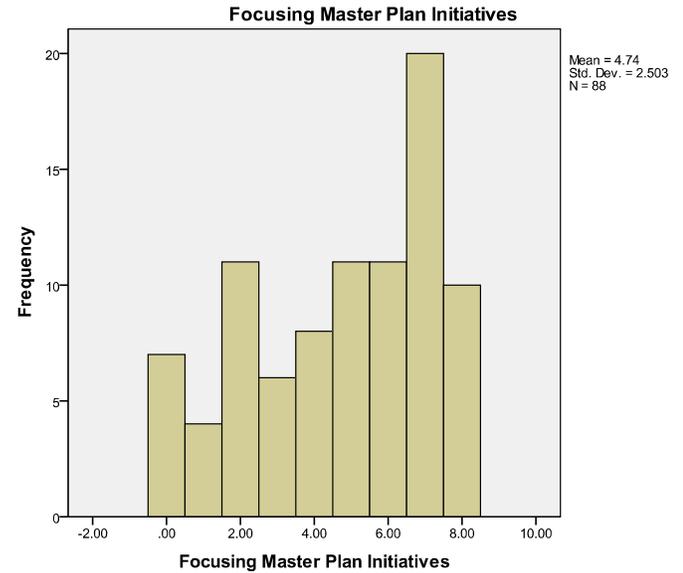


Respondents of Survey II most frequently reported “Outreach” as the second most significant job duty of the Sustainability Coordinator at their institution at 20.5 percent. This ranking was closely followed by the fifth and fourth ranking representing 19.3 percent and 18.2 percent respectively.

**Table 30: Frequency Distribution of Rankings from Survey II**

Respondents: Focusing Master Plan Initiatives				
Ranking	Frequency	Percent	Valid Percent	Cumulative Percent
.00	7	8.0	8.0	8.0
1.00	4	4.5	4.5	12.5
2.00	11	12.5	12.5	25.0
3.00	6	6.8	6.8	31.8
4.00	8	9.1	9.1	40.9
5.00	11	12.5	12.5	53.4
6.00	11	12.5	12.5	65.9
7.00	20	22.7	22.7	88.6
8.00	10	11.4	11.4	100.0
Total	88	100.0	100.0	

Figure 20: Frequency Distribution of Rankings from Survey II Respondents: Focusing Master Plan Initiatives

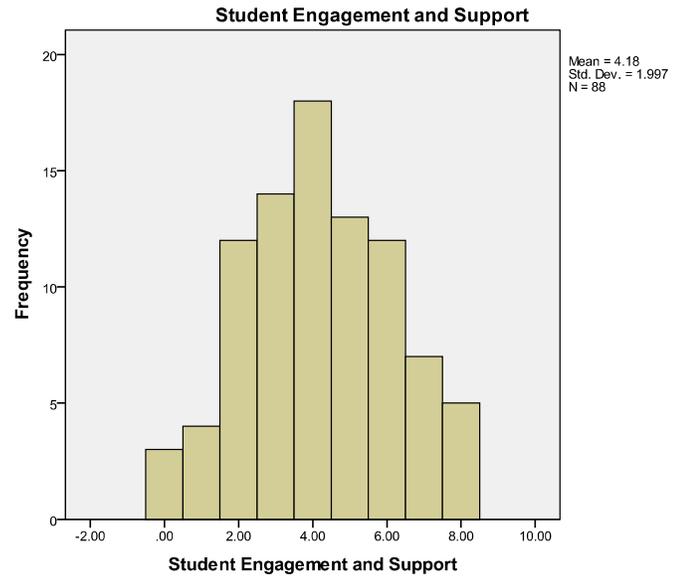


Survey II respondents most frequently reported “Focusing Master Plan Initiatives” as the seventh most significant job role for the Sustainability Coordinator at their institution. This was represented by 22.7 percent of participants. However 12.5 percent of the respondents ranked “Focusing Master Plan Initiatives” as number 2, 5, 6, and 7<sup>th</sup> in importance.

**Table 31: Frequency Distribution of Rankings from Survey II**  
**Respondents: Student Engagement and Support**

Ranking	Frequency	Percent	Valid Percent	Cumulative Percent
.00	3	3.4	3.4	3.4
1.00	4	4.5	4.5	8.0
2.00	12	13.6	13.6	21.6
3.00	14	15.9	15.9	37.5
4.00	18	20.5	20.5	58.0
5.00	13	14.8	14.8	72.7
6.00	12	13.6	13.6	86.4
7.00	7	8.0	8.0	94.3
8.00	5	5.7	5.7	100.0
Total	88	100.0	100.0	

Figure 21: Frequency Distribution of Rankings from Survey II Respondents: Student Engagement and Support.

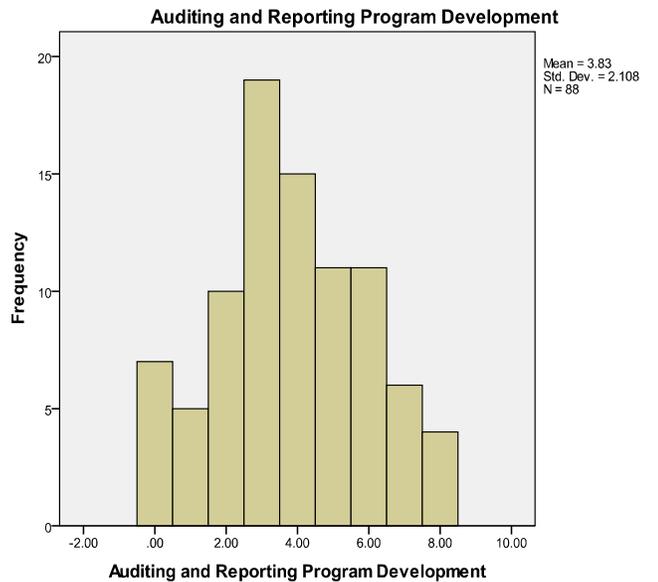


Participants most frequently ranked “Student Engagement and Support” as the fourth most significant job duty for the Sustainability Coordinator at 20.5 percent. However 13 to 15 percent of the respondents ranked this role second, third, fifth, and sixth in importance.

**Table 32: Frequency Distribution of Rankings from Survey II**  
**Respondents: Auditing and Reporting Program Development**

Ranking	Frequency	Percent	Valid Percent	Cumulative Percent
.00	7	8.0	8.0	8.0
1.00	5	5.7	5.7	13.6
2.00	10	11.4	11.4	25.0
3.00	19	21.6	21.6	46.6
4.00	15	17.0	17.0	63.6
5.00	11	12.5	12.5	76.1
6.00	11	12.5	12.5	88.6
7.00	6	6.8	6.8	95.5
8.00	4	4.5	4.5	100.0
Total	88	100.0	100.0	

Figure 22: Frequency Distribution of Rankings from Survey II Respondents: Auditing and Reporting Program Development



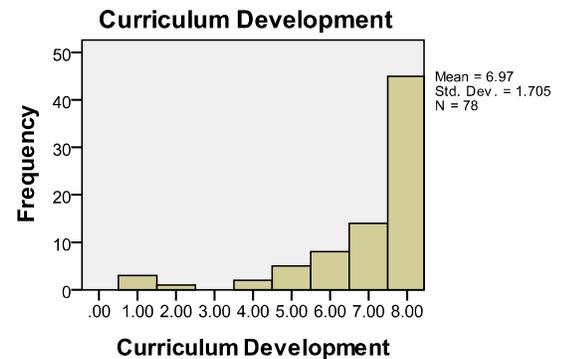
The job duty of “Auditing and Reporting Program Development” was reported as the third most significant by Survey II respondents at 21.6 percent. Again, there was a wide range in responses as 10 to 17 percent of the institutions ranked the duty as number 2, 4, 5, and 6 in importance.

### Ranking of Curriculum Development as a Duty of the Sustainability Coordinator

**Table 33: Frequency Distribution of Rankings from Survey II**  
**Respondents: Curriculum Development**

Ranking	Frequency	Percent	Valid Percent	Cumulative Percent
.00	10	11.4	11.4	11.4
1.00	3	3.4	3.4	14.8
2.00	1	1.1	1.1	15.9
4.00	2	2.3	2.3	18.2
5.00	5	5.7	5.7	23.9
6.00	8	9.1	9.1	33.0
7.00	14	15.9	15.9	48.9
8.00	45	51.1	51.1	100.0
Total	88	100.0	100.0	

**Figure 23: Frequency Distribution of Rankings from Survey II Respondents: Curriculum Development**



Conversely, “Curriculum Development” has been reported as the lowest priority for job duties. Participants ranked the role as 8<sup>th</sup> (of 8 possible) and reported by 51.1percent of responses. See Appendix 6 for the complete set of roles of the position and how they were ranked amongst respondents at institutions that employ a full-time Sustainability Coordinator. The variety of tasks that the Sustainability Coordinator typically performs contributes to the concept of the “Triple Bottom Line,” which is composed of the issues, “financial, environmental, and social performance” (c2e3, p.10).

**Table 34: Summary Table of Position Role Rankings by Survey II Respondents**

Job Roles	/RANK	1	2	3	4	5	6	7	8	rbar.j
Curriculum Development		3	1	0	2	5	8	14	55	7.09
Energy Reduction		18	11	10	11	11	14	9	4	3.96
Waste Reduction		3	12	12	12	12	16	11	10	4.82
Collaboration of Sust Programs		47	14	12	6	3	1	2	3	2.20
Outreach		4	18	14	16	17	4	9	6	4.16
Focusing Master Plan		4	11	6	8	11	11	20	17	5.38
Auditing & Reporting		5	10	19	15	11	11	6	11	4.47
Student Engagement		4	12	14	18	13	12	7	8	4.46

. Table 34 provides a collaboration of the frequency tables from the Survey II respondents ranking the position roles (or tasks) of the Sustainability Coordinator at their institution. Each option is presented with their corresponding frequency of rankings. Friedman tests were run on the rankings. It was found that the differences were significant at the .010 level with a chi-squared value of 15.086 with five degrees of freedom. The most apparent distinctions in the rankings of the position roles are those of “Collaboration of Sustainability Programs” most frequently ranked as number one and “Curriculum Development” which his most frequently ranked as number eight (last). The rankings of motivators to establish the position also follow this trend- “Collaboration of Sustainability Programs” ranking high and “Curriculum Development” ranking low (see table 25).

#### 4.43 Position Funding (Costs/ Benefits)-

Creating a new position inherently has costs associated with its establishment. Funds will have to be generated in order to pay the salary of the individual serving the position, possibly a budget within the department of the position for operational costs, and other budgetary needs as determined by the individual institution.

Participants were given five choices from where their funding was developed. The choices provided are as follows:

- Derived from a budget or combination of budgets
- Student Fee
- Endowment
- Cost Savings
- Grant

**Table 35: Frequency Distribution of Survey II Respondents: Funding Source of the Position**

Source of Funding	Frequency	Percent	Valid Percent	Cumulative Percent
Derived From Budget or Combination of Budgets	70	79.5	79.5	79.5
Student Fee	2	2.3	2.3	81.8
Endowment	1	1.1	1.1	83.0
Cost Savings	1	1.1	1.1	84.1
Grant	1	1.1	1.1	85.2
Budget and Student Fee	2	2.3	2.3	87.5
Budget and Endowment	3	3.4	3.4	90.9
Budget and Cost Savings	1	1.1	1.1	92.0
Budget and Grant	5	5.7	5.7	97.7
Student Fee and Cost Savings	1	1.1	1.1	98.9
Budget, Student Fee, and Grant	1	1.1	1.1	100.0
Total	88	100.0	100.0	

The overwhelming majority of respondents, 79.5 percent, reported that the position was funded through a budget or a combination of budgets. Some respondents reported that funding came from a combination of sources which can be observed in Table 22. Participants were not limited in the number of funding sources they were allowed to select in Survey II.

## Cost Savings Generation Due to Establishment of Sustainability Coordinator Position

**Table 36: Frequency Distribution of Survey II Respondents:**

**Cost Savings Greater than Cost of Position**

Response	Frequency	Percent	Cumulative Percent
No	56	63.6	63.6
Yes	32	36.4	100.0
Total	88	100.0	

Furthermore, participants were asked about the nature of cost savings at their institution. Sustainability Coordinators have a unique position in which their efforts at the college or university can provide enough cost savings (typically through energy reduction) that exceed the cost of the salary of the position. This is not true in all cases, and some institutions have a full-time position specifically dedicated to energy reduction. However, this can be a motivator in developing the Sustainability Coordinator position at an institution. All participants were able to comment on this question and 63.6 percent reported that cost savings alone were not great enough to fund the position. Some respondents commented that their institution does not seek this data and does not use it as a means to establish merit for the position<sup>15</sup>.

**Table 37: Frequency Distribution of Survey II Respondents:**

**Non-tangible Benefits of Position Merit Position**

Response	Frequency	Percent	Cumulative Percent
1.00	47	53.4	100.0
Missing .00	41	46.6	
Total	88	100.0	

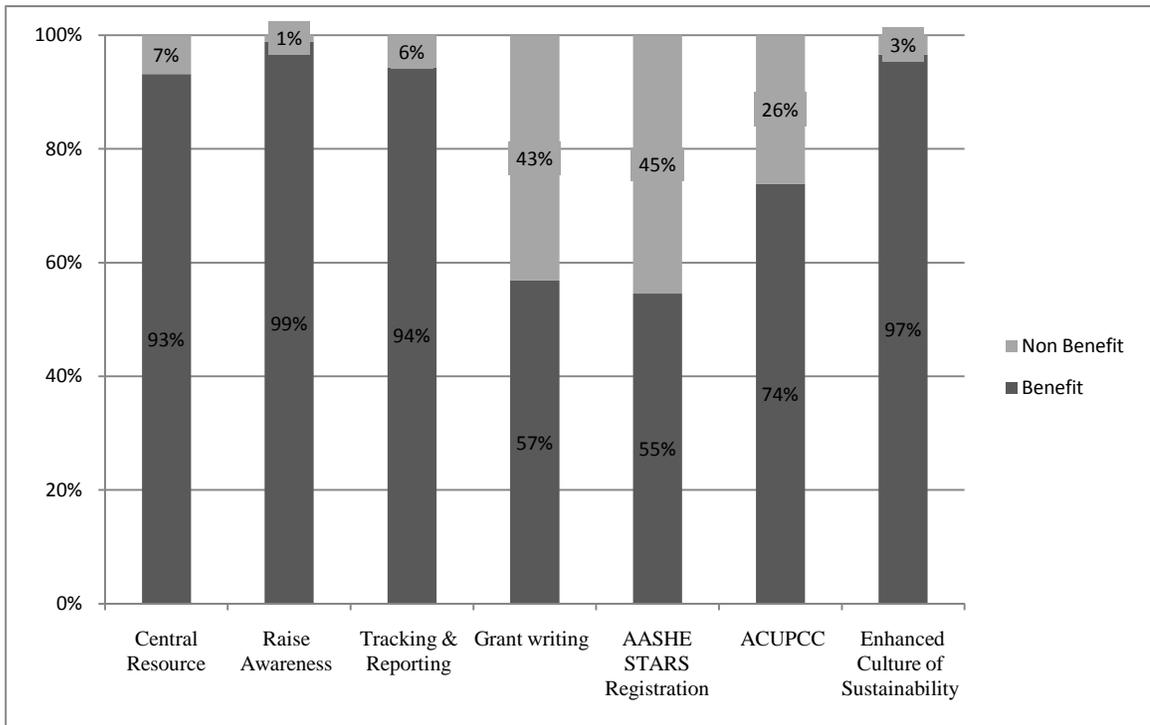
<sup>15</sup> Participants were only asked whether or not cost savings were great enough to fund the position. However, it is important to note that at some institutions, Sustainability Coordinators could be conducting grant writing efforts which provide monetary means for the position. Figure 24 shows that “Grant Writing to Fund Sustainability Programs at the Institution” to be a benefit to the institutions of 57 percent of survey respondents.

As a supplemental question, those participants who reported cost savings was *not* great enough to fund the position were asked if the non-tangible benefits were great enough to merit the position. Examples of non-tangible benefits of the position include: student/faculty satisfaction with heightened sustainability focus at the institution; an enhanced “culture of sustainability” at the institution; more opportunities to promote green marketing the institution; a feeling of environmental stewardship; enhanced student/faculty relationships through sustainability programs. Of those who responded “no” (n=56) to the question regarding cost savings, 47 reported that the non-tangible benefits were great enough to merit continuing the position at the institution. This information would imply that up to 82 of 88 (93.2 percent) of respondents believed that either direct cost savings and/or non-tangible benefits of the position were sufficient to justify the position of a Sustainability Coordinator at their institution.

This provides interesting data that could be further explored on the value systems of colleges and universities. Cost savings is an obvious benefit that any institution would like to enjoy. However, how much weight does monetary gain have versus non-tangible benefits as previously listed? Unfortunately, these topics are not within the scope of this research, but it would be valuable if they were expanded on.

#### 4.44 Reported Benefits of the Position

Figure 24: Bar Graph: Benefits of the Position as Reported by Survey II Respondents



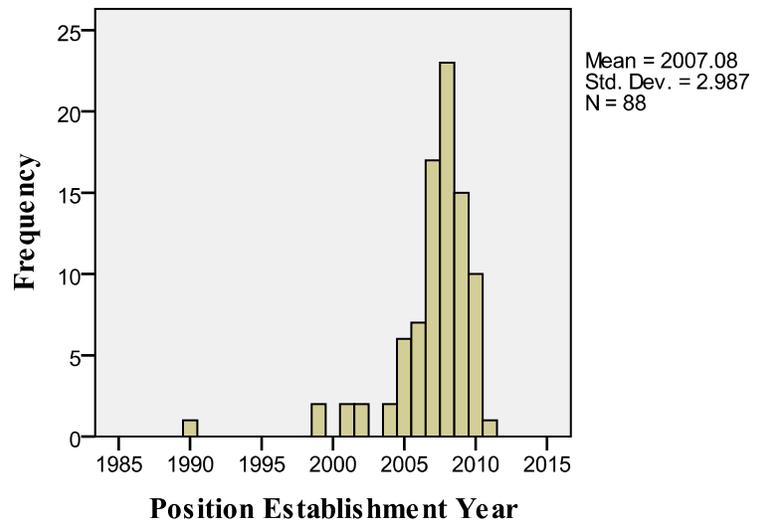
Within Survey II, participants were given a list of benefits associated with the position. Participants were asked to “check all that apply.” There were four subjects that were checked by the vast majority of the participants. Those benefits most frequently reported were “Central resource for students and staff to promote their sustainable initiatives” at a reported 93 percent. “Raise awareness for sustainability programs on campus” was reported by 99 percent of participants, “Tracking and reporting progress of sustainability programs (energy reduction, etc)” represented by 94 percent and “Enhanced culture of sustainability” was checked by 97 percent of participants. “Grant writing to fund sustainability programs at the university,” “Developing requirements of AASHE STARS registration,” and “Developing requirements for ACUPCC” were reported at 57 percent, 55 percent, and 74 percent respectively. The numbers represent lower levels than the previously listed benefits, but still represent the majority of participants in every category.

#### 4.45 Year of Position Establishment-

**Table 38: Frequency Distribution of Survey II Respondents:**

Position Establishment Year			
Year Established	Frequency	Percent	Cumulative Percent
1990	1	1.1	1.1
1999	2	2.3	3.4
2001	2	2.3	5.7
2002	2	2.3	8.0
2004	2	2.3	10.2
2005	6	6.8	17.0
2006	7	8.0	25.0
2007	17	19.3	44.3
2008	23	26.1	70.5
2009	15	17.0	87.5
2010	10	11.4	98.9
2011	1	1.1	100.0
Total	88	100.0	

**Figure 25: Frequency Distribution of Survey II Respondents: Position Establishment Year**



It is interesting to understand the trend at which the position of a Sustainability Coordinator is developing. Survey II was conducted in the early months of 2011, so it is understandable that only one of the survey respondents reported the position having been established in 2011. Position establishment peaked in 2008 at 26 percent. The years that we closest to the peak of 2008 were 2007 at 19.3 percent and 2009 at 17 percent. There are a number of factors that could contribute to the decline in the number of new positions added after 2008. Many institutions were forced to tighten their budgetary capabilities after the financial collapse of 2008. Furthermore, only 88 of the 178 Sustainability Coordinators responded to the survey. It is possible that an up-ward shift was exhibited by the entire 178 positions within the scope of this research.

#### 4.46 Sustainability Habits at University Affecting Future Planning

It has been suggested that the benefits of having a Sustainability Coordinator are not limited to those received by the student solely during their time at the college or university. What effect do habits learned from sustainability practices (encouraged and promoted by a Sustainability Coordinator) at the higher education level have on the lives of students beyond their time at the college or university? Lunardini (2002), when speaking of living in residence halls suggests “Exchange among student in this setting often prove to be influential components of the major decisions in students’ lives” (p. 537). One can infer from this statement that lessons learned in residence halls and essentially higher education could make a difference in habits learned and future behavior of students and faculty. This is especially true in the case of residence halls because often times sustainability within the residence halls is a major focus for universities seeking to advance their sustainability programs. Students are encouraged to recycle, reduce their energy usage, and to be innovative in sustainability issues within the residence halls.

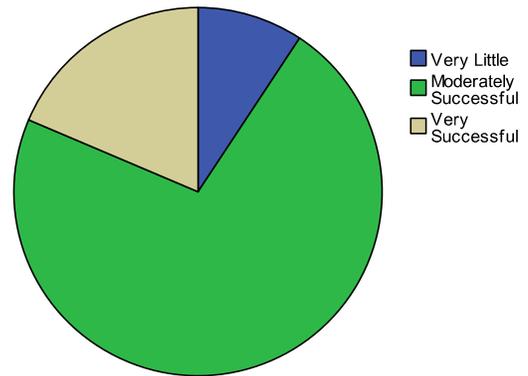
Cost savings and/or carbon foot print projections could be a very interesting aspect of this concept. While this is not within the scope of this research, it could be beneficial to calculate how much an average individual could reduce their carbon footprint over a lifetime by practicing sustainability habits learn while attending a college or university. Life time cost savings could be projected by determining the average reduction in consumption as learned while attending a college or university; compare the percentage reduction to the average life time cost of energy consumption cost (adjusting for inflation). As stated earlier, this information is not within the scope of this research, although it could be very beneficial and even aid in promoting the position of a Sustainability Coordinator at a college or university.

**Table 39: Frequency Distribution of Survey II Respondents: Sustainability Habits**

<b>Learned at Institution Affecting Future Planning</b>				
Response	Frequency	Percent	Valid Percent	Cumulative Percent
Very Little	8	9.1	9.3	9.3
Moderately Successful	62	70.5	72.1	81.4
Very Successful	16	18.2	18.6	100.0
Total	86	97.7	100.0	
Missing	.00	2	2.3	
Total	88	100.0		

Participants were asked, “To what extent has establishing the Sustainability Coordinator focused the behavior of faculty/students to include sustainability in their future planning?” They were given the options of “none,” “very little,” “moderately successful,” and “very successful.” The significant majority of participants, 70.5 percent, reported “moderately successful.” There were not any participants that reported “none,” therefore it was not included in the table or graph. There were 2 participants that chose not to answer the question.

**Figure 26: Pie Chart: Frequency Distribution of Survey II Respondents: Sustainability Habits Learned at Institution Affecting Future Planning**



## CHAPTER V

### CONCLUSIONS

#### 5.1 Conclusions

The position of a Sustainability Coordinator is a new concept being established across college and university campuses not only in the United States, but across the world. Many institutions are becoming aware of the significant benefit that a Sustainability Coordinator can afford their institution. These benefits can come in the form of tangible benefits such as cost savings through energy consumption reduction or through non-tangible benefits such as enhanced morale for sustainability programs or a sense of environmental stewardship. As Fiorino states, “Sustainability must move from being a concept that is debated and analyzed to one that guides decision making and action at all scales of governance and policy sectors” (p. S86). Establishing a Sustainability Coordinator is a method of developing policy and progress towards sustainability goals at an institution. Fully understanding the roles and benefits of this position will create an opportunity for administrators to be best prepared to establish the position. This research has clarified two important concepts within a subject that is limited in references due to the recent, rapid emergency of the position at institutions across the United States. The concepts concluded in this research:

- 1) Accredited four-year institutions with Sustainability Coordinators (178) in the United States can be typified by a set of characteristics. The characteristics most common of

these institutions are: They are categorized as Large, Research, and have a “Highly Residential” residential status. It was also found that their status as Public or Private Institution did not have any relevance within this study. Finally, Geographic Location based on region had little relevance as those institutions within the scope of this research were relatively evenly distributed.

- 2) Institutional culture is skewed towards a “culture of sustainability” at institutions with Sustainability Coordinators within the scope of this research based on responses to a survey. It was found that a majority of the participating institutions qualified for a “high” level for culture of sustainability. It is unknown if the culture of sustainability contributes to the establishment of a Sustainability Coordinator, or if the establishment of a Sustainability Coordinator contributes to the culture or sustainability.

Ultimately, the position of a Sustainability Coordinator is sparking an interest at institutions across the world. This is due to institutions seeking to create avenues for efficiency along with society as a whole beginning to comprehend their impact on the natural environment and is making an effort to make adjustments accordingly. The long-term benefits of establishing a Sustainability Coordinator will be unique to each individual institution based on their intentions, inputs, and mission. Some institutions will reap enough cost savings to create funding for new programming and positions. Other institutions will win awards for environmental stewardship, while other institutions will be pioneers in developing new technologies for sustainable development. If established a nurtured appropriately, the position of a Sustainability Coordinator could be limitless in the benefits that it could provide to an institution of higher education.

## 5.2 Recommended Further Study:

The position of a Sustainability Coordinator is one which there is much yet to be learned. This research has established information on those institutions that currently employ Sustainability Coordinators. It would be valuable to utilize the data established in this research in

order to make predictions on which institutional characteristics are indicative of institutions likely to establish a Sustainability Coordinator. This information would allow institutions to assess themselves and determine if they are best suited to establish a Sustainability Coordinator.

It was found in this research that the majority of the respondents of Survey II (representing 49.4 percent, 88/178, of the entire population of those meeting the criteria of this research) experienced a high level of “culture of sustainability” at their institution. It is recommended that the culture of sustainability is evaluated at an equal number of institutions that do not have Sustainability Coordinators. This could provide valuable insights on how culture of sustainability affects the sustainability progress at institutions.

As this position gains momentum, it would be valuable to do any type of further study which adopts a more in-depth approach to any of the topics explored within this research. It would also be valuable to further extend the topics of this research to include community colleges and perhaps institutions outside the United States. It would be interesting to note any distinctions in the comparisons.

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## APPENDICES

### Appendix 1: Survey I

#### **Sustainability Coordinator Research Survey** **Conducted by: Shanna McFeeters, Oklahoma State University**

A Sustainability Coordinator (sometimes referred to as a Sustainability Officer) is staff or faculty position hired by a university that coordinates the sustainability efforts of a university through a variety of duties such as working with student programs, energy conservation, recycling management, construction management, research etc. The following survey is intended to gather data that seeks to understand the driving factors of why some universities choose to hire a sustainability coordinator while others do not. Please fill out the survey to the best of your knowledge.

(For an electronic copy, please contact Shanna McFeeters at [shanna.mcfeeters@okstate.edu](mailto:shanna.mcfeeters@okstate.edu))

**Your Name:**

**University Name:**

**Public or Private University:**

**Position at University:**

**Email Address:**

The information provided above will in no way be published with the findings of this research. It is requested in order to understand regional differences as they pertain to sustainability coordinators. Furthermore it is requested that you provide contact information so that the results from this study can be sent to you after it is complete.

**1) Does your university employ a full time Sustainability Coordinator?**

If yes, please continue to 2a-11a

If no, please continue to 2b-7b

**2a) What is the official title of the “Sustainability Coordinator” at your university if it is different from “Sustainability Coordinator.”**

**3a) What are the general job duties of this position?**

**4a) Who supervises this position? What is their title?**

**5a) What is this position's approximate salary?**

**6a) When was this position established?**

**7a) What, if any, were some of the obstacles associated with establishing this position?**

**8a) Has this position been associated with cost reduction for the University (i.e. energy cost reduction)?**

**9a) Does the person who occupies this position regularly work on projects with members of the student body?**

**10a) What has been the most beneficial aspect of establishing this position?**

**11a) Since the establishment of this position, has your university's "College Sustainability Report Card<sup>16</sup>" score increased?**

**Please return this completed survey to:**

**Shanna McFeeters  
35757 S 4205 Rd  
Inola, OK 74036**

**-OR-**

**Shanna.Mcfeeters@okstate.edu**

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<sup>16</sup> The College Sustainability Report Card is "designed to identify colleges and universities that are leading by example in their commitment to sustainability. The aim is to provide accessible information for schools to learn from one another's experiences, enabling them to establish more effective sustainability policies". Information regarding the report card and any school's status is available at [www.thegreenreportcard.org](http://www.thegreenreportcard.org)

**Please fill out the following section if your university does not currently employ a full time sustainability coordinator.**

**2b) Are you aware of any discussions among administration at your university in regards to the potential for hiring a sustainability coordinator?**

**3b) What have been the major inhibiting factors for establishing a sustainability coordinator position?**

**4b) Have student groups expressed an interest in such a position being established at your university?**

**5b) Is the administration aware of their Green Report Card Score?<sup>17</sup>**

**6b) Is the administration of your university satisfied with their green report card score? If not, what are any recent developments that have been made towards improving their score?**

**7b) Does your university have any other sustainability programs that require a full time staff position such as recycling, energy reduction, etc?**

**Please return this completed survey to:**

**Shanna McFeeters  
35757 S 4205 Rd  
Inola, OK 74036**

**-OR-**

**Shanna.Mcfeeters@okstate.edu**

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<sup>17</sup> The College Sustainability Report Card is “designed to identify colleges and universities that are leading by example in their commitment to sustainability. The aim is to provide accessible information for schools to learn from one another’s experiences, enabling them to establish more effective sustainability policies”. Information regarding the report card and any school’s status is available at [www.thegreenreportcard.org](http://www.thegreenreportcard.org)

**Sustainability Coordinator Research Survey**  
**Conducted by: Shanna McFeeters, Oklahoma State University**

A Sustainability Coordinator (sometimes referred to as a Sustainability Officer or other similar titles) is a staff or faculty position hired by an institution of higher education that coordinates the sustainability efforts of an institution through a variety of duties such as working with student programs, energy conservation, recycling management, construction management, research etc. This research seeks to report findings on full-time Sustainability Coordinators at four-year accredited universities in the United States. The following survey is intended to gather data that seeks to understand the rationales for institutions of higher education to establish and continue maintaining a Sustainability Coordinator position. Please fill out the survey to the best of your knowledge by checking the appropriate spaces with “x” or ranking them. Please make comments as necessary.

**Your Name:**

**University Name:**

**Position at University:**

**I. Institutional Culture regarding Sustainability**

- 1) Generally speaking, is your president supportive of sustainable initiatives?  
\_\_\_Y \_\_\_N
  
- 2) How is the position funded?  
\_\_\_ Derived from a budget or combination of budgets  
\_\_\_ Student Fee  
\_\_\_ Endowment  
\_\_\_ Cost Savings  
\_\_\_ Grant (which:)
  
- 3) Is being a “green” or “sustainable” university a source of advertising or recruitment for the university?  
\_\_\_Y \_\_\_N
  
- 4) Have donors made contributions towards the success of sustainability programs?  
\_\_\_Y \_\_\_N

5) Is the student body highly active in sustainability programs?

Y  N

Examples:

6) To what extent has establishing the Sustainability Coordinator focused the behavior of faculty/students to include sustainability in their future planning.

None  Very Little  Moderately Successful  Very Successful

## II. History and Functions of the Sustainability Coordinator

1) When was the position established?

**Year:**

2) Why was the position established? **(Please rank 1-6)**

Need for Coordination/Collaboration of University Sustainability Programs

Student Demand

An Attempt to Create Cost Savings

Need to Develop Sustainability in Curriculum

Helps Satisfy the Mission of the University

Relieve Other Faculty/Staff Members of the Duties Associated with the Position

3) What are the major roles for the Sustainability Coordinator at the university? **(Please rank 1-8)**

Curriculum Development

Energy Reduction

Waste Reduction

Collaborating Sustainability Programs on Campus

Outreach

Master Plan Initiatives

Auditing & Reporting Program Development

Student Engagement & Support

4) Benefits resulting from creating the Sustainability Coordinator position (check all that apply)

Central Resource for students and staff to promote their sustainable initiatives

Raise awareness of sustainability programs on campus

Tracking & reporting progress of sustainability programs (energy reduction, etc)

Grant writing to fund sustainability programs at the university

Developing requirements for AASHE STARS registration

Developing requirements for ACUPCC

Enhanced Culture of Sustainability at the University

- 5) Do the tasks that the Sustainability Coordinator performs generate enough cost savings to pay for the position?

**Y**  **N**

If no, are the non-tangible benefits great enough to merit continuing the existence of the position?

**Y**  **N**

Comments:

### Appendix 3: Survey 1 (Part 2) Institutions With Out Sustainability Coordinators Results

Table 40: Survey I (Part 2)- Institutions With Out Sustainability Coordinators:  
Most Common Responses

<b>Most Common Responses</b>	
Inhibiting Factors	Funding & Lack of Interest
Student Interest	24/39 Yes 15/39 No
Green Report Card Awareness	18/39 Yes 21/39 No
Other Sustainability Programs	26/39 Yes 13/39 No

Participants at institutions that did not have a full-time Sustainability Coordinator were asked about the inhibiting factors in developing the position at their institution. Questions were open ended. The most common responses reported that funding for the position and a general lack of interest for the establishment of the position. Participants were asked if the student body was interested in developing the position. The majority of participants (24/39) reported that the students had expressed interest in the position at their institution. The participants were then asked if they were aware of their Green Report Card score. The majority (21/39) reported that they were not aware of their score. It was later found that a significant number of the participants in the survey were not part of the Green Report Card Program which helps explain their lack of knowledge. Finally, participants were asked if their institution employed another full-time position that focused on sustainability such as an energy manager or a waste manager. A significant majority (26/39) reported that their institution had a position of this type established.

Appendix 4: ACUPCC Signatories and AASHE STARS Registrants for all 178 Sustainability Coordinators

Within the body of this research, the status as signatories of the ACUPCC and AASHE STARS Registrants were evaluated as they pertained to institutional culture by those respondents of Survey II. Figures 28 and 29 display the frequencies of the institutions within the scope of this research (178) as a whole as signatories of the ACUPCC and AASHE-STARS registrants.

**Table 41: Frequency Distribution of Institutions with Sustainability**

**Coordinators: ACUPCC Signatories**

Status	Frequency	Percent	Cumulative Percent
0	62	34.8	34.8
1	116	65.2	100.0
Total	178	100.0	

0= No

1=Yes

**Table 42: Frequency Distributions of Institutions with Sustainability**

**Coordinators: AASHE-STARS Registrants**

Status	Frequency	Percent	Cumulative Percent
0	95	53.4	53.4
1	83	46.6	100.0
Total	178	100.0	

0=No

1=Yes

VITA

Shanna Diane McFeeters

Candidate for the Degree of

Master of Science

Thesis: THE CHARACTERISTICS AND CULTURE OF SUSTAINABILITY AT COLLEGES AND UNIVERSITIES THAT EMPLOY FULL-TIME SUSTAINABILITY COORDINATORS

Major Field: Environmental Science

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Completed the requirements for the Master of Science in Environmental Science at Oklahoma State University, Stillwater, Oklahoma in May, 2011.

Completed the requirements for the Bachelor of Science in Environmental Science at Oklahoma State University, Stillwater, OK/ United States of America in May, 2009.

Experience:

Iowa Tribe of Oklahoma, Summer 2009  
Environmental Intern

Oklahoma Water Resources Research Institute, August-November 2008  
Student Facilitator

Oklahoma Department of Transportation, Summer 2006  
Intern

Professional Memberships:

Golden Key Honor Society  
Pi Kappa Phi Honor Society  
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Name: Shanna Diane McFeeters

Date of Degree: May, 2011

Institution: Oklahoma State University

Location: Stillwater, Oklahoma

Title of Study: THE CHARACTERISTICS AND CULTURE OF SUSTAINABILITY  
AT COLLEGES AND UNIVERSITIES THAT EMPLOY FULL-TIME  
SUSTAINABILITY COORDINATORS

Pages in Study: 77

Candidate for the Degree of Master of Science

Major Field: Environmental Science

Scope and Method of Study:

The position of a full-time Sustainability Coordinator at colleges and universities is one that has rapidly gained momentum in the last 5 years, but is far from a new concept. Sustainability Coordinators contribute to institutions of higher education through coordination of sustainability programs, student engagement, carbon footprint reduction, and a plethora of other options that can be unique to the institution based on their mission and goals. As this position is gaining grows, so does the need for literature regarding the position. This research seeks to conclude concepts on the nature of institutions that have established the position. These concepts include 1) The possible trends of characteristics of institutions that have established a full-time Sustainability Coordinator 2) The level of culture of sustainability at institutions with full-time Sustainability Coordinators. The scope of this research is limited to four-year or greater accredited colleges and universities in the United States.

Findings and Conclusions:

This research makes conclusions on the trends of characteristics of institutions with Sustainability Coordinators. This paper also makes conclusions on the level of culture of sustainability at institutions with Sustainability Coordinators. Based on the responses from the survey conducted, this study goes on to make explanations about the nature of the position itself.

ADVISER'S APPROVAL: Dr. Arthur Stoecker

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