



College students' perceptions of campus sustainability

Campus
sustainability

Richard Emanuel

*Department of Communication, Alabama State University,
Montgomery, Alabama, USA, and*

J.N. Adams

Department of English, Tuskegee University, Tuskegee, Alabama, USA

79

Received 27 January 2010
Revised 31 March 2010
Accepted 4 August 2010

Abstract

Purpose – The purpose of this paper is to ascertain whether or not there are differences between college students in Alabama and Hawaii based on three questions: are students concerned about the present/future? What do students know about sustainability? Who is responsible for sustainability?

Design/methodology/approach – Two approaches were used to address these questions. First, a summary of sustainability efforts at universities in Alabama and Hawaii is provided. Second, a random sample of 406 undergraduate students at two universities in Alabama ($n = 258$) and at a community college in Hawaii ($n = 148$) were surveyed.

Findings – The data indicate that sustainable programs and practices are being implemented on a number of college campuses in Alabama and in Hawaii. Students surveyed in both states are concerned about wasteful consumption and pollution. Respondents' were similar in their self-assessed knowledge about sustainability. Respondents were also similar in their views about who is responsible for sustainability. However, a consistently larger proportion of Hawaii respondents expressed concern for and willingness to participate in sustainable practices. So, there seems to be little or no "knowledge gap" when it comes to campus sustainability, but there does seem to be a "commitment gap." Possible reasons for this are discussed.

Originality/value – Since the 1980s, many universities in the USA have elected to incorporate sustainability practices into campus development and day-to-day operations. They are now emerging as environmental leaders and innovators. An understanding of students' perceptions of sustainability may give insight into whether or not and how they are likely to engage in sustainable practices.

Keywords Sustainable development, Students, Universities, United States of America

Paper type Research paper

1. Introduction

In recent years, US colleges and universities have increased their awareness of and commitment to sustainable practices. Student organizations and special events have emerged to focus on sustainable practices regarding transportation, construction, energy, waste, food, water, and landscaping. Annual conferences and a nation-wide "report card" system have also marked the coming of age of campus sustainability. However, knowledge of and commitment to campus sustainability has not reached all corners of academia. Some scholars consider knowledge of sustainability as fundamental to the successful implementation of sustainable practices on college campuses (Eagan and Orr, 1992; Earl *et al.*, 2003; Cosmann *et al.*, 2006).

The authors wish to acknowledge and thank Alan Cecil Ragains for his assistance in collecting the Hawaii data used in this study.



A 2007 *Forbes* article titled “America’s greenest states” identified Hawaii as the fourth greenest state and Alabama as the 48th greenest (Wingfield and Marcus, 2007). The focus of the present study is a comparison of college students’ perceptions of and commitment to campus sustainability in Alabama and Hawaii. The expectation is that since Hawaii is ranked much higher than Alabama, students in Hawaii may be more knowledgeable about and more committed to campus sustainability than their Alabama counterparts. If the data confirm this expectation, one could argue that students’ knowledge about and commitment to campus sustainability is correlated with statewide “green” practices. However, if the data do not support this expectation, one could argue that students’ knowledge about and commitment to campus sustainability exists somewhat independent of any “green” practices occurring off campus. Either way, this study offers a glimpse into the relationship between on- and off-campus sustainability.

To provide some context, a brief overview of social events which served as precursors to the modern sustainability movement is offered. Next, sustainability, and more specifically, campus sustainability is defined. Current sustainability efforts at colleges in Alabama and Hawaii are discussed. Comparative data from Alabama and Hawaii college students concerning their perceptions of sustainability are presented. Finally, a discussion of the implications of these data is provided along with directions for future research.

1.1 Precursors to sustainability

US Senator Gaylord Nelson of Wisconsin emphatically stated that “we need a comprehensive and nationwide program to save the national resources of America” (Schneider, 2005). Nelson was disturbed that an issue as important as the environment was not addressed in politics or by the media, so he established the first Earth Day on April 22, 1970. An estimated 20 million people nationwide attended festivities that day. This grassroots movement eventually led to national legislation such as the Clean Air Act and the Clean Water Act and the establishment of the Environmental Protection Agency. About 20 years later, more than 200 million people in 141 countries participated in Earth Day celebrations (“First Earth Day,” America’s Library, 2008).

Annual Earth Day celebrations and environmental awareness served as the backdrop juxtaposed to the energy crisis of the late 1970s that galvanized national attention. “Fueled” by gasoline rationing, American policies and practices concerning national energy self-sufficiency, independence and sustainability became a pressing priority. In recent years, this priority translated into federal funding for universities that often included environmental expectations. A growing movement in the USA requires state and federally funded universities to include environmental education in the student curriculum and incorporate sustainability practices into campus development and day-to-day operations.

With 17 million college students in the USA, and millions more worldwide, many university presidents consider it a moral responsibility to be at the forefront of the green movement (Pope, 2007; Powers, 2007). In 2007, college and university presidents throughout the USA chartered the American College and University Presidents Climate Commitment (2009). This document provides “a framework and support for America’s colleges and universities to go climate neutral.” The Commitment recognizes:

[...] the unique responsibility that institutions of higher education have as role models for their communities and in training the people who will develop the social, economic and technological solutions to reverse global warming.

This kind of commitment is shared by institutions of higher education around the globe. To date, over 600 universities worldwide have committed themselves towards sustainability by signing international agreements such as the Bologna Charter, The Halifax Declaration, the Talloires Declaration and the Copernicus Charter for Sustainable Development.

Institutions of higher education have long-served society as leaders and innovators in research, discovery, and social responsibility. Now, they are assuming a leadership role in environmental responsibility, sustainability, and campus sustainability in particular (Kevany *et al.*, 2007; Adomssent *et al.*, 2007; Walton, 2009).

1.2 Sustainability defined

Each of these events (and more) has contributed to the current state of sustainability efforts in the USA. The first step in introducing sustainability and sustainable practices on a college campus is education. This includes familiarizing students with a host of new terms and concepts. For anyone who may not be familiar with the term “sustainability,” it is a relatively stable concept albeit with several different definitions and components. Sustainability encompasses renewable energy sources, conservation, recycling, environmentally friendly land development, water management, and waste disposal.

Sustainability is an economic, social, and ecological concept. The original term – “sustainable development” – was adopted by the Agenda 21 program of the United Nations in 1992 (Agenda 21, 1992). However, some have objected to the term “sustainable development” as an umbrella term since it implies *continued* development, and insist that it should be reserved only for development *activities*. Sustainability, then, is used as an umbrella term for all of human activity.

Put in simpler terms, sustainability is providing for the best for people and the environment both now and in the indefinite future. In 1987, an international group of politicians, civil servants and environmental experts published the *Brundtland Report*. This report includes an oft-cited definition of sustainability: “meeting the needs of the present generation without compromising the ability of future generations to meet their needs” (Brundtland, 1987).

1.3 Campus sustainability defined

In terms of college campus sustainability, a useful operational definition is the list of criteria used in the College Sustainability Report Card – an initiative of the Sustainable Endowments Institute in Cambridge, Massachusetts (College Sustainability Report Card, 2009). The criteria are presented below and are organized by the four types or categories of sustainability described herein.

Ecological

- Food and recycling – evaluates dining services policies, including recycling and composting programs.
- Green building – recognizes campus-wide green building guidelines and green building design for new and existing buildings.
- Transportation – focuses on alternative transportation for students, faculty, and staff, as well as alternative fuel or hybrid technology for campus fleets.

Economic/financial

- Endowment transparency – addresses accessibility to endowment investment information and shareholder proxy voting records.

- Investment priorities – considers prioritization of return on investment, investment in renewable energy funds, and investment in community development loan funds.

Institutional

- Administration – examines sustainability policies and commitments by school administrators and trustees.
- Student involvement – looks at student participation in sustainability initiatives and support for these activities by school administrators.
- Shareholder engagement – looks at shareholder proxy voting practices, including opportunities for student, faculty, and alumni participation.

Energetic

- Climate change and energy – looks at energy efficiency, conservation, commitment to emissions reductions, and use of renewable energy on campus.

Regardless of how it is defined or measured, sustainability is ultimately a human value, not a fixed, independent state of social, economic, and ecological affairs. Despite ongoing scientific and political debate regarding specific definitions of sustainability, the term has proven to be a useful organizing concept (Floyd *et al.*, 2001).

The present study focuses on students' understanding of the term and concept of sustainability. An adequate understanding of the concept of sustainability is an important first step toward initiating or participating in or advocating for intentional sustainability behaviors. This kind of study is also important since student perceptions of campus sustainability are under-researched (Eagan and Orr, 1992; Earl *et al.*, 2003; Kagawa, 2007).

In 2007, Wingfield and Marcus reported on "America's Greenest States." Their analysis and ranking was based on six equally weighted categories: carbon footprint, air quality, water quality, hazardous waste management, policy initiatives and energy consumption. According to their rankings, the "greenest" state is Vermont and the *least* green state is West Virginia. Hawaii ranked 4th while Alabama ranked 48th. This presents an interesting question.

2. Research question

RQ. Do Alabama college students' perceptions of campus sustainability differ from those of college students in Hawaii?

One could reasonably assume that since Hawaii ranks much higher than Alabama on the "green" scale, college students in Hawaii would be more knowledgeable about and committed to campus sustainability than students in Alabama. But are they?

3. Methodology

One way to address this question is to identify the sustainability-related activities on college campuses in Alabama and Hawaii. Campus sustainability activities in these two states are derived from the (College Sustainability Report Card, 2009). Another way to address this question is to survey college students in both states asking about their perceptions of and commitment to campus sustainability. This study takes both approaches.

Before presenting the findings, a description of the survey instrument and a brief description of the two sample groups of student respondents are provided. Sample demographics are described and survey results are organized around three key questions:

- (1) Are students concerned about the present/future?
- (2) What do students know about sustainability?
- (3) Who is responsible for sustainability?

3.1 *Survey description*

The campus sustainability questionnaire provided some introductory material before posing 22 questions. Specifically, the survey provided a three-sentence explanation about “growing talk of threats to our environment” and a “growing movement [...] to have [...] universities [...] incorporate sustainability practices into campus [...] operations.” A simple definition of sustainability was provided using *italic* for emphasis. The instrument was comprised of 13 questions which asked about the respondent’s understanding of and commitment to sustainable activities. Responses were provided using a five-point Likert-type scale from (1) strongly disagree to (5) strongly agree with a (3) neutral response option. Question 14 asked respondents to identify from a list of five terms – recycling, conservation, “green” building, nuclear energy, and wind turbines – the term that they do *not* associate with sustainability. Similarly, question 15 asked respondents to identify from a list of five terms – pollution, solar energy, chemicals, pesticides, and plastics – the term they *do* associate with sustainability. The next five questions asked for demographic information: year-in-school, gender, age, on/off campus resident, and political affiliation. The next question asked respondents to indicate whether or not they recycle, use environmentally friendly products, and/or have energy-efficient transportation. The last question asked the respondent whether or not they consider working for an environmental cause to be important. The survey took less than five minutes to complete.

Survey questions were developed using interviews with students, faculty, and administrators, through focus groups, and via the café method. The café method is a result-driven participative focus group interview. It is designed to extract information concerning students’ opinions and behaviors about issues – in this case, campus sustainability. The café group aids survey construction by enabling researchers to collect information and points of view quickly. A pilot-test of the survey instrument was conducted fall 2007. Wording of certain survey questions and other instrument refinements were made based on the pilot-test. The test/re-test reliability of the instrument was 0.61 ($n = 48$).

3.2 *Samples*

Surveys were randomly distributed to undergraduate students at two public universities in Alabama and at one community college in Hawaii during spring and fall semesters 2008. Data were collected from a total of 406 students – 258 (1.4 percent) undergraduate students at two major public universities in Alabama, and 148 undergraduate students (0.3 percent) at a public community college in Hawaii. These samples represent 1.4 and 0.3 percent, respectively, of the total student populations from which the samples were taken. Respondents voluntarily participated and received no extra-credit for doing so. Although demographic information was collected, respondents remained anonymous.

3.3 Analysis

Pearson's chi-square (χ^2) statistic is used to investigate whether distributions of categorical variables differ from one another. With probabilities of 0.05 or less, the χ^2 -statistic indicates that there is a statistically significant difference between the categorical variables analyzed. This test statistic is appropriately used for analysis of Alabama and Hawaii student responses to survey questions.

3.4 Demographics

The majority (36.2 percent) of the respondents were freshmen, 30.4 percent were sophomores, 16.5 percent juniors, and 17 percent seniors. Most (60.1 percent) were female. Respondents ranged in age from 17 to 55; most (92.8 percent) were younger than 25 and one-fourth of all respondents were 19 years old. About 66 percent reside on campus. Most (46 percent) claimed to have no political affiliation nor do they consider themselves to be either Democrat or Republican. Only one-third identified themselves as Democrat, and only one-fifth identified themselves as Republican. The demographic characteristics of the sample confirm that it is representative of the demographics of the entire student populations from which the samples were taken.

The only notable difference in demographic characteristics between the Alabama and the Hawaii students is that almost all (93.9 percent) of the Hawaii respondents live off campus. The Alabama respondents were as likely to live on campus as they were to live off campus (49.2 to 50.8 percent, respectively).

4. Findings

4.1 Sustainability-related activities at Alabama colleges

There are 15 public universities and 27 public community and technical colleges in Alabama. Only public institutions of higher education are examined in this study. Of these, four Alabama universities are included in The College Sustainability Report Card (2009): University of South Alabama (D -), the University of Alabama - Birmingham (D), the University of Alabama (C), and Auburn University (B -). A more detailed description of the sustainability efforts and activities at these schools can be found at: www.greenreportcard.org. Neither of the two Alabama universities that were surveyed for this project is included on the Report Card despite the fact that some sustainable practices are being implemented at each[1].

4.2 Sustainability-related activities at Hawaii colleges

The University of Hawaii is composed of ten campuses - three universities: Manoa, Hilo, West O'ahu; and seven community colleges: Hawaii, Honolulu, Kapiolani, Kauai, Leeward, Maui, and Windward. Although the University of Hawaii is not a member of the Association for the Advancement of Sustainability in Higher Education (n.d.), it has signed the Presidents Climate Commitment (American College and University Presidents Climate Commitment, 2009). As early as 2002, it adopted sustainability as a guiding principle and began instituting sustainability policies and practices throughout its ten-campus system (University of Hawaii Office of Sustainability, 2005). These policies and practices are designed to preserve and enhance the Islands' physical environment and quality of life by balancing the university's resource use against its growth, protecting Hawaii's unique ecosystems, and encouraging diversity rather than uniformity. The university has an Office of Sustainability and it has adopted a Charter of

Sustainability that serves as a guide on the path to a sustainable future. The university's grade on The College Sustainability Report Card (2009) is a C.

These activities suggest a level of student input, student-administration interaction and commitment, and student leadership toward campus sustainability. But how familiar are these students with the term sustainability? A survey of college students in Alabama and Hawaii sought to assess students' perceptions of and commitment to campus sustainability. Of particular interest are students' responses to three questions:

- (1) Are students concerned about the present/future?
- (2) What do students know about sustainability?
- (3) Who is responsible for sustainability?

4.3 Survey results

The first key question is: are students concerned about the present/future? The majority (69 percent Alabama; 85 percent Hawaii) of the respondents agreed or strongly agreed that they are "quite concerned about the wasteful consumption of natural resources and the destruction/pollution of the environment" (Table I). Likewise, the majority (59 percent Alabama; 71 percent Hawaii) of the respondents agreed or strongly agreed that "our present economy is based on practices that will have negative consequences on the world's future generations."

The second key question is: what do students know about sustainability? Less than one-fourth (20 percent Alabama; 19 percent Hawaii) of the respondents indicated that they know a great deal about sustainability, and about one-third (38 percent Alabama; 32 percent Hawaii) indicated that they do *not* know much about sustainability. Respondents were presented with four "non-green" terms and one "green" term in a random order. When asked to identify the term they *do* associate with sustainability, a larger proportion of Hawaii students (77.7 percent) than Alabama students (55.4 percent) answered correctly (Table II). Respondents were also presented with four "green" terms and one "non-green" term in a random order and asked to identify the term they *do not* associate with sustainability. Table II shows that a larger proportion of Hawaii students (70.1 percent) than Alabama students (53.9 percent) answered correctly.

	Strongly agree or agree		Strongly disagree or disagree		<i>n</i>	χ^2	<i>p</i>
	Hawaii (%)	Alabama (%)	Hawaii (%)	Alabama (%)			
I am quite concerned at present about the wasteful consumption of natural resources and the destruction/pollution of the environment	85	69	3	10	405	13.85	0.001
I believe that our present economy is based on practices that will have negative consequences on the world's future generations of people	71	59	3	14	404	12.70	<0.01

Note: df = 2

Table I.
Concern for the present/future

Table II.
Knowledge about
sustainability

Please identify the term in the following group that you do NOT associate with sustainability									
	Recycling (%)	Conservation (%)	"Green" building (%)	Nuclear energy (%)	Wind turbines (%)	n	χ^2	p	df
Hawaii	5.1	5.1	9.5	70.1	10.2	395	17.13	<0.01	4
Alabama	3.1	3.1	21.3	53.9	18.6				
Please identify the term in the following group that you DO associate with sustainability									
	Pollution (%)	Solar energy (%)	Chemicals (%)	Pesticides (%)	Plastics (%)	n	χ^2	p	df
Hawaii	10.8	77.7	1.4	2.2	7.9	397	20.9	<0.0010	4
Alabama	17.4	55.4	6.6	6.2	14.3				

The third key question is: who is responsible for sustainability? A majority (57 percent Alabama; 69 percent Hawaii) of respondents agreed or strongly agreed that the university should make sustainability a priority in campus planning, development, and day-to-day operations (Table III). Almost three-fifths (56 percent) of Alabama students and about two-thirds (68 percent) of Hawaii students agreed or strongly agreed that everyone in the university community should have to support sustainable solutions to environmental problems (Table III). Only 27 percent of Alabama students and 10 percent of Hawaii students indicated that they believe it is necessary for their school to include environmental education across the curriculum.

In terms of personal responsibility for sustainability, Table IV shows that a majority of respondents stated that they “want to help create a sustainable university, community, and world” (65 percent Alabama; 78 percent Hawaii). The majority (60 percent Alabama; 72 percent Hawaii) also indicated they are willing to support and participate in campus

	Strongly agree or agree		Strongly disagree or disagree		<i>n</i>	χ^2	<i>p</i>
	Hawaii (%)	Alabama (%)	Hawaii (%)	Alabama (%)			
I believe that my school should make sustainability a priority in campus planning, development, and day-to-day operations	69	57	3	10	405	7.99	<0.05
I believe that everyone in my school's community should support sustainable solutions to environmental problems	68	56	5	12	403	7.62	<0.05
I do NOT believe it is necessary for my school to include environmental education across the curriculum	10	27	68	45	405	23.93	<0.001
I do NOT believe that everyone in my school's community should have to support sustainable solutions to environmental problems	9	21	58	47	405	9.71	<0.01

Note: *df* = 2

Table III.
Attitudes toward school/community responsibility for sustainability

	Strongly agree or agree		Strongly disagree or disagree		<i>n</i>	χ^2	<i>p</i>
	Hawaii (%)	Alabama (%)	Hawaii (%)	Alabama (%)			
I want to help to create a sustainable campus, community, and world	78	65	3	7	404	7.98	<0.05
I will support and participate in my school's initiatives to protect the environment	72	60	5	10	406	6.80	<0.05
I will NOT support my school's actions to protect the environment	6	12	84	69	404	11.94	<0.01

Note: *df* = 2

Table IV.
Attitudes toward personal responsibility for sustainability

initiatives to protect the environment. An even larger proportion (69 percent Alabama, 84 percent Hawaii) disagreed with the statement that they will not support their school's actions to protect the environment (Table IV).

Table V shows that 83.8 percent of Hawaii students indicated that they currently recycle and 51.4 percent use environmentally friendly products. However, less than half of Alabama respondents indicated that they currently recycle (38 percent) or use environmentally friendly products (32.6 percent). Nearly, the same proportion of Hawaii students (19.6 percent) as Alabama students (16.3 percent) have energy-efficient transportation. Yet, only 26 percent of Alabama students and 10 percent of Hawaii students agreed that they need to change their *own* current energy use practices (Table VI). Almost all the respondents (91.9 percent Alabama; 95.1 percent Hawaii) indicated that they feel it is important to work for an environmental cause.

5. Discussion

Students in Alabama and Hawaii are like-minded about their concern over wasteful consumption and pollution of the environment. They are also in agreement that our economy is based on practices that will have negative consequences on the world's future generations. The difference is that a larger proportion of the Hawaii respondents than Alabama respondents hold these views.

About a third of Alabama and Hawaii respondents said they know a great deal about sustainability, and about a third said they *do not* know a great deal about sustainability. However, about 20 percent more Hawaii students than Alabama students correctly answered questions about terms that are or are not associated with sustainability. So, while students in both states may have given an honest self-assessment of their knowledge about sustainability, more Hawaii respondents than Alabama respondents demonstrated an accurate understanding of the concept of sustainability.

	Presently Recycle	Use environmentally friendly products (%)	Have energy efficient transportation (%)	Do none of these
Hawaii (%)	83.8	51.4	19.6	8.1
Alabama (%)	38.0	32.6	16.3	29.1
χ^2	82.18	14.16	1.17	24.54
<i>p</i>	<0.001	<0.001	>0.05	<0.001

Table V.
Sustainability practices

Note: *n* = 406

	Strongly agree or agree		Strongly disagree or disagree		<i>n</i>	χ^2	<i>p</i>
	Hawaii (%)	Alabama (%)	Hawaii (%)	Alabama (%)			
I do NOT feel I need to change any of my current energy use practices	10	26	72	53	405	16.96	<0.001

Table VI.
Attitude toward personal energy use practices

Note: *df* = 2

When asked who is responsible for campus sustainability, the majority of students in both states agreed or strongly agreed that everyone in the university community should have to support sustainable solutions to environmental problems. They also agreed that the university should make sustainability a priority in campus planning, development, and day-to-day operations. And yet, a larger proportion of Hawaii respondents than Alabama respondents indicated that they are personally willing to participate in and support campus initiatives to protect the environment. This same pattern occurs when a larger proportion of Hawaii respondents than Alabama respondents indicated they want to personally help create a sustainable university, community, and world.

What seems to be at work here is only a slight “knowledge” gap but a larger “commitment” gap with more Hawaii students than Alabama students indicating commitment to campus sustainability. While the Alabama and Hawaii respondents seem to agree on the importance of campus sustainability and that they want to personally play a role in its realization, this commitment is consistently expressed by a larger proportion of Hawaii respondents. Part of this may be attributable to the fact that more Hawaii students are already *doing* something in support of campus sustainability. For many of the Alabama respondents, sustainability may still be a concept and not a reality for them personally. This is borne out by the relatively low proportion of Alabama respondents and the relatively high proportion of Hawaii respondents that recycle, use environmentally friendly products, and/or have energy-efficient transportation. This is even more telling since half of the Alabama respondents live on campus and nearly all of the Hawaii respondents live *off* campus. The Alabama respondents do not seem to have the same level of commitment for a sustainable campus where they *live* as the Hawaii respondents do for the campus to which they commute.

An extension of this is the possibility that since the two Alabama universities surveyed are in the early stages of embracing sustainability, students may be waiting and watching to see a demonstrable commitment to sustainable practices from their university administrators. Only a quarter of Alabama respondents agreed that they need to change their own current energy use practices. It may be that students are looking for leadership. That is, as administrators commit to specific sustainable practices, especially those that are visible and that directly involve students, then more students will be committed to the cause. The Alabama respondents already indicate moderate support for campus sustainability, yet about a third or less personally engage in sustainable practices.

The more likely explanation may be that student responses are reflecting the state of sustainable practices in the community where their campus is located. Thus, regardless of whether the student lives on- or off-campus, their personal commitment to campus sustainability is an extension of practices they are already engaged in which are being supported by their community.

Further research could shed light on these and other possible explanations of any commitment gaps. It could also track changes in student commitment to campus sustainability as universities and their communities’ sustainable activities mature (<http://greencities.com>).

6. Conclusion

Sustainable programs and practices are being implemented on a number of college campuses in Alabama and in Hawaii. Students surveyed in both states expressed concern about wasteful consumption and pollution. Respondents’ were similar in their

self-assessed knowledge about sustainability. Respondents were also similar in their views about who is responsible for sustainability. However, a consistently larger proportion of Hawaii respondents expressed concern for and willingness to participate in sustainable practices. So, there seems to be little or no “knowledge gap” when it comes to campus sustainability, but there does seem to be a “commitment gap.” The most likely explanation for this may be that student responses are reflecting the state of sustainable practices in the community where their campus is located. This suggests that, when it comes to campus sustainability, students follow where their community leads.

Rather than wait for off-campus initiatives, college administrators must talk about, commit to, and lead the way in establishing sustainable practices on campus. They should provide opportunities and incentive to students, faculty and staff to engage in campus sustainability. Today’s college students are tomorrow’s leaders. By raising awareness of sustainability and by providing opportunities to participate in it, universities can be powerful change agents with far-reaching impact.

Universities in the USA and around the world are emerging as environmental leaders and innovators (Steptoe, 2007; Sustainable Urban Neighborhoods, n.d.). Their relatively small but significant steps may soon give rise to “giant leaps” in sustainable practices. The proverbial torch is now being passed to a new generation of students who seem ready, willing, and able to light the way.

Note

1. For more information on Environmental Education in Alabama, see the Environmental Education Association of Alabama web site: www.eea.us/

References

- Adomssent, M., Godemann, J. and Michelsen, G. (2007), “Transferability of approaches to sustainable development at universities as a challenge”, *International Journal of Sustainability in Higher Education*, Vol. 8 No. 4, pp. 385-402.
- Agenda 21 (1992), United Nations Environment Programme, available at: www.unep.org/Documents.Multilingual/Default.asp?DocumentID=52 (accessed 26 June 2009).
- America’s Library (2008), *First Earth Day – America’s Story from America’s Library: Jump Back in Time – Modern Era (1946-Present)*, available at: www.americaslibrary.gov/cgi-bin/page.cgi/jb/modern/earthday_3 (accessed 12 July 2009).
- American College and University Presidents Climate Commitment (2009), available at: www.presidentsclimatecommitment.org (accessed 12 May 2009).
- Association for the Advancement of Sustainability in Higher Education (n.d.), available at: www.aashe.org/membership/members/institutional_members (accessed 9 June 2009).
- Brundtland, G.H. (1987), *Our Common Future: Report of the World Commission on Environment and Development*, United Nations General Assembly, New York, NY.
- College Sustainability Report Card (2009), available at: www.greenreportcard.org/ (accessed 10 July 2009), see also: *Campus Environment 2008: A National Report Card on Sustainability in Higher Education Trends and New Developments in College and University Leadership, Academics and Operations*, 2nd ed. (released 21 August 2008) at the National Wildlife Federation Campus Ecology, available at: www.nwf.org/campusEcology/campusreportcard.cfm, see also: *Sustainability Organizations in Higher Education*, available at: www.umacs.org/sustainability-organizations-higher-education, see also: *The Great Green List*, available at: www.greatgreenlist.com/

- Cosmann, N., Gray, M., Legge, T., Leous, J., Parry, N. and Valicenti, L. (2006), "Perceptions of campus environmental sustainability at Columbia University", 31 March, available at: www.columbia.edu/cu/mpaenvironment/pages/CampussustainabilityReport.pdf (accessed 25 June 2009).
- Eagan, D.J. and Orr, D. (1992), *The Campus Environmental Responsibility*, Jossey-Bass, San Francisco, CA.
- Earl, C., Lawrence, A., Harris, N. and Stiller, S. (2003), "The campus community and the concept of sustainability: an assessment of college of Charleston student perceptions", *Chrestomathy: Annual Review of Undergraduate Research at the College of Charleston*, Vol. 2, pp. 85-102.
- Floyd, D.W., Vonhof, S.L., Seyfang, H.E., Heissenbuttel, J., Cantrell, R., Stocker, L., Wilkinson, B. and Connaughton, K. (2001), "Forest sustainability: a discussion guide for professional resource managers", *Journal of Forestry*, Vol. 99 No. 2, pp. 8-31, Allen, T.F.H. and Hoekstra, T.W. (1994), "Toward a definition of sustainability", in Covington, W.W. and DeBano, L. (Eds), *Sustainable Ecological Systems: Implementing an Ecological Approach to Land Management*, Rocky Mountain Forest and Range Experiment Station, US Department of Agriculture, Flagstaff, AZ.
- Kagawa, F. (2007), "Dissonance in students' perceptions of sustainable development and sustainability: implications for curriculum change", *International Journal of Sustainability in Higher Education*, Vol. 8 No. 3, pp. 317-38.
- Kevany, K., Huisingh, D. and Garcia, F. (2007), "Sustainability: new insights for education", *International Journal of Sustainability in Higher Education*, Vol. 8 No. 2.
- Pope, J. (2007), "Colleges make green commitment", *San Francisco Chronicle*, 12 June, available at: www.sfgate.com/cgi-bin/article.cgi?f=/n/a/2007/06/12/national/a133835D99.DTL&hw=colleges%2Bcarbon&sn=001&sc=1000 (accessed 15 June 2009).
- Powers, E. (2007), "Presidents and their Green Pledge", *Inside Higher Education*, 13, June, available at: www.insidehighered.com/news/2007/06/13/climate (accessed 12 June 2009).
- Schneider, K. (2005), "Gaylord Nelson: 1916-2005", *New York Times in San Francisco Chronicle*, 4 July, p. A-2, available at: www.sfgate.com/cgi-bin/article/article?f=/c/a/2005/07/04/MNGEQDIQ0T1.DTL (accessed 27 June 2009).
- Stephoe, S. (2007), "Getting schools to think and act green", *Time Magazine*, 12 August, available at: www.unity.edu/News/green1.asp (accessed 10 February 2008).
- Sustainable Urban Neighborhoods (n.d.), available at: <http://sun.louisville.edu/> (accessed 19 February 2009).
- University of Hawaii Office of Sustainability (2005), available at: www.hawaii.edu/sustain/index.php?section=1 (accessed 28 May 2009).
- Walton, J. (2009), "Climate action planning at North American colleges and universities", *International Journal of Sustainability in Higher Education*, Vol. 10 No. 3.
- Wingfield, B. and Marcus, M. (2007), "America's Greenest States", *Forbes*, 17 October, available at: www.forbes.com/2007/10/16/environment-energy-vermont-biz-beltway-cx_bw_mm_1017greenstates.html (accessed 15 February 2008).

Further reading

- Charlepan (2007), "Troy sustainability initiative", Message posted to the Hudson-Mohawk Socio-Economic Collaborative and the Community Renewable Energy (CoRE) Project Forum, 10 June, available at: http://hm.swapspace.com/index_html/talkback/1181485795/discussionitem_view, see also: The Center for Environmental Research, available at: <http://troy.troy.edu/cer/index.html>

- Cleveland, C.J. (2008), "Exxon Valdez oil spill", 26 August, available at: www.eoearth.org/article/Exxon_Valdez_oil_spill (accessed 14 May 2009).
- NWS Southern Region (2009), "Weather Forecast Office in key west recognized as LEED certified 'green' building", available at: www.srh.noaa.gov/srh/srnews/stories/2009/kwgreen.htm (accessed 7 July 2009).
- Specker, L. (2008), "O.A.R. has message for USA", *Mobile Press Register*, 6 November, available at: www.al.com/music/mobileregister/index.ssf?/base/entertainment/1225966594315840.xml&coll=3 (accessed 26 June 2009).

About the authors

Richard Emanuel is originally from Huntsville, Alabama. He earned a BS degree in Speech and Theater from the University of Montevallo, a Master of Speech Communication degree from Auburn University, and a PhD in Communication from Florida State University. Dr Richard Emanuel has taught a variety of communication courses at two- and four-year, private and public colleges over the past quarter century. He is currently Professor of Communication at Alabama State University in Montgomery, Alabama. Richard Emanuel is the corresponding author and can be contacted at: EmanuelASU@yahoo.com

J.N. Adams is originally from Tacoma, Washington. He earned his BA degree in Speech Education from the University of Puget Sound, an MA in Communication Studies from Washington State University, and is ABD in Organizational Communication Training at Washington State University. He couples 30 years of higher education teaching experience as an adjunct and full-time community college and university instructor with 25 years of experience in retail operations management, outside sales, and corporate training and development. He is currently an Instructor of Speech in the Department of English at Tuskegee University, Tuskegee, Alabama.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.