

Sustainability: What Matters to Students, Educators, and Hospitality and Tourism Professionals?

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Introduction

As climate change gains global attention from events like the summit in Copenhagen held during December of 2009, the need for sustainable tourism is more important than ever; with comprehensive education in sustainability concepts and practices essential, and methods for networking to share information critical. Specifically, sustainability focuses on the triple bottom line of equity, economics, and environment; or people, products, and the planet (Dhiman, 2008); or education, environment, and economics (personal communication with Carrie Blaskowski, Jackson County Green Energy Park, January 12, 2010). All of these relate to sustainable tourism, which can be defined as “an alternative form of tourism that improves or, at the minimum, maintains the quality of experiences for the visitors, life of host communities, and the environment [indefinitely] on which both the host community and the visitor depend.” (McIntyre, 1993, p. 11; Sirakaya-Turk, Ekinci, & Kaya, 2008, p. 414; Tosun, 1998, p. 596).

However, although sustainability is taking center stage globally, it is not receiving significant attention within the curriculum of universities in the United States, and in particular within hospitality management programs. In terms of pressing societal problems, the next generation is inheriting a set of ecological and cultural challenges within communities and across the globe that will shape the world of university students for generations to come, requiring continuous assessment of the responsiveness of the university community and the education provided (Aber, Kelly & Mallory, 2009). Thus, sustainability is fundamentally about education that continually presents questions of value and practice by asking what is best and why, for the long run.

The hospitality industry is a multi-billion dollar collection of businesses consisting of companies within the food services, accommodations, recreation, tourism, and entertainment sectors. The educational programs in this field include a variety of subjects from the management of foodservice and lodging operations to spas, resorts, tourism attractions, sports venues, conventions, and special events. While much has been written about sustainability education in general, very little has been published or taught regarding sustainability concepts and practices within courses in the hospitality curriculum (Deale, Nichols, & Jacques, 2009). Given the depth and breadth of this industry worldwide, the need for future leaders with core values toward sustainability is critical.

Background

In a recent survey of hospitality educators, primarily from the United States, the researchers found that while respondents valued sustainability it was not taught on a consistent basis within hospitality management courses (Deale, Nichols, & Jacques, 2009). A rather surprising finding was that although 72% of the hospitality educators believed in the importance of sustainability, they did not consistently include it in their courses or provide student-learning experiences that incorporated sustainability. Some educators noted that they referred to sustainability concepts and practices such as efficient use of water resources or recommending that hospitality operations change from the use of incandescent light bulbs to compact fluorescent light bulbs without using the term sustainability (Deale, Nichols, & Jacques, 2009).

While sustainability may not be commonly integrated into the hospitality management curriculum, it is here to stay as a concept and in practice. Therefore, it is an important part of the education of hospitality management students who are the future industry leaders and managers. But what should be taught? How can a sustainable learning community be established on university campuses creating C.O.R.E. values (Curriculum, Operations, Research, and Engagement)? One challenge in creating the C.O.R.E. structure of teaching, research, operations, and engagement has been the interdisciplinary nature of university programs. Sustainability has sometimes been incorporated into university operations and facilities management, for example the recent focus on implementing trayless dining (New York Times, 2009; The Harvard Crimson, 2010), and yet these practices are not necessarily integrated into educational programs. Suggested methods for teaching sustainability include using an interdisciplinary approach and problem-based learning as a framework (Dale & Newman, 2005); transdisciplinary case studies and problem-centered learning (Posch & Steiner, 2006; Stauffacher, Walter, Lang, Wiek, & Scholz, 2006); and project-based learning (Stauffacher et al., 2006). In fact, , the connection between teaching and research blurs when students perform the work, while research and engagement are inseparable when constituents are working on the research team (Aber et al, 2009). At the same time, many universities could identify incongruent academic programs, courses, or research projects that relate directly to the principles of sustainability, yet to maintain the concepts and integrity of sustainability, different kinds of scholarship should be considered that focus on comprehensive interactions among the interested parties. However, once there is an understanding of these issues, including stakeholder similarities and differences, the question then becomes, how will this information be shared via networking opportunities or other means that focus on the cultivation of a sustainable learning community?

This study addressed these questions by conducting a survey of hospitality students, industry professionals, and educators about what they believe are the important concepts needed in sustainability education. It attempted to determine similarities and differences in beliefs about sustainability between these constituent groups and then to figure out how ongoing communication strategies can be developed allowing for networking among these constituents to encourage collaboration. It is expected that the results of this study can have application beyond the hospitality curriculum and act as a blueprint for other academic disciplines.

Teaching Sustainability

Encountering the many challenges of sustainability requires rethinking and reengineering the core functions of society, which include the curriculum and pedagogy for teaching and learning. The challenges for educators involve motivating and empowering the next generation of “citizens” to change in fundamental ways, creating an environment where learning is sustainable (Aber, et al., 2009) and developing open channels of communication.

As noted, strategies for incorporating sustainability education into higher education in general include using an interdisciplinary approach and problem-based learning as a framework (Aber, et al., 2009; Dale & Newman, 2005), focusing on transdisciplinary case studies and problem-centered learning (Posch & Steiner, 2006; Stauffacher, Walter, Lang, Wiek, & Scholz, 2006), and implementing project-based learning (Stauffacher et al., 2006). Substantial work on sustainability education has been conducted in countries around the world (Busby, 2001; Fien, 2002; Dale & Newman, 2005), with less focus on this curriculum area in U.S. institutions, at least in the area of hospitality and tourism (Deale et al., 2009).

An essential component of sustainability education centers on environmentally conscious behavior and therefore, it is paramount that more is learned about the relationship between human actions and the environment. This increased awareness has been shown to influence individual lifestyle choice (Peattie, 1995; GFK, 2007). One function of knowledge is to help maintain strong attitudes. Attitudes are typically considered strong when they are resistant to change and persistent over time. As a result, knowledgeable people with strong attitudes are careful, expert processors of information. Most analyses of attitude strength recognize that knowledge contributes to a high attitude level [name deleted to maintain the integrity of the blind review process]. Thus, incorporating sustainability into the hospitality management curriculum should increase knowledge of the environment and ultimately change attitudes and behaviors.

As stated earlier, one component of the triple bottom line of sustainability is the environment, with environmental education a frequently discussed concept. In a definition from 1970, Stapp (1970, p.15) noted that “environmental education is aimed at producing a citizenry that is knowledgeable concerning the biophysical environment and its associated problems, aware of how to help solve these problems, and motivated to work toward their solution.” Environmental education has also been described as the process of determining values and clarifying concepts to develop skills and attitudes to appreciate the relationship between humans and their environment with a goal of establishing standards of behavior (Palmer, 1998).

However, because environmental issues and sustainability are gaining in importance in the current business environment, it is incumbent on the academic community, as well as industry professionals, to ensure that students entering the workforce contribute usefully to the continued development of sustainable systems. For example in the United Kingdom, the inclusion of subjects such as *Citizenship and Sustainable Development* within the schools’ National Curriculum lay the groundwork for these subjects to be developed at the tertiary level (Eber, 2002). Preliminary research carried out in this project indicates that where sustainability is being taught at the collegiate level, it is mainly within the framework of degrees in development, geography, and environmental studies. Perhaps this reflects the initiatives advanced by aid and development agencies (e.g. USAID), international and non-governmental organizations (NGOs), and environmental pressure groups to pursue sustainable agendas and it omits the important and emerging issue of the relationship between sustainability and business.

Numerous papers concerned with teaching sustainability education in post-secondary institutions have been published in the *International Journal of Sustainability in Higher Education* (IJSHE) and many focus on how it has been included in curricula within academic areas and incorporated into university and college system operations (Alvarez & Rogers, 2006; Busby, 2001; Dale & Newman, 2005; Dawe, Vetter, & Martin, 2001; Down, 2006; Fien, 2002; Keene & Baldwin, 2004; Kermath, 2002; Kevany, 2007; Lourdel, Gondran, Laforest, Debray, & Brodhag, 2007; Moore, 2005; Posch & Steiner, 2006; Wright, 2003, Aber, et al., 2009). As Yencken and Wilkinson (200) noted, numerous authors have centered their papers on specific economic, social, political, or ecological factors and the American Association of Sustainability in Higher Education (AASHE, 2009) observed that campuses frequently focus on efforts to implement environmental or carbon-footprint audits, reduce the use of energy, increase the use of waste and recycling systems, and engage in green purchasing policies.

Perhaps more significant than the lack of resources available in sustainable hospitality education is the apparent low level of attention given to the topic with the hospitality curricula (Deale et al.,

2009). In addition, while educators mention the need to focus on the triple bottom line of sustainability, there appears to be little focus on multiple perspectives of sustainability education, specifically the beliefs of industry professionals, educators, and students in terms of if, what, and how sustainability concepts and practices should be taught in the hospitality management curriculum. As sustainability practices become more evident to hospitality industry professionals, educators, and students, all three groups need to determine priorities and shared concerns in terms of sustainable hospitality business practices, for it has been said that “the most powerful obstacle to improving the health of the planet is not regression or entropy; it’s a steadily affirmed equilibrium” (Brookfield, 1987, p. 10).

Project Hypotheses

The researchers in this study evaluated the perceived importance of sustainability education by constituents in hospitality management programs: students, educators responsible for teaching the students, and industry leaders that will employ the graduating students. This study focused on uncovering the beliefs of these three groups, including their similarities, differences, and viewpoints toward sustainability education in hospitality management curriculum, with the expectation of helping to transform this aspect of hospitality management programs. The following research hypotheses were proposed:

- H₁: There is a significant difference between stakeholder groups as to environmental attitudes.
- H₂: There is a significant difference between stakeholder groups as to environmental behavior.
- H₃: There is a significant difference between stakeholder groups as to their interest in sustainability.
- H₄: There is a significant difference between stakeholder groups in importance of environmental issues in a hospitality curriculum.
- H₅: There is a significant difference between stakeholder groups in the priority of environmental topics that are relevant in the hospitality curriculum.
- H₆: There is a significant difference between stakeholder groups in how sustainability concepts and practices can best be learned.

Design of the study

The population for this study was based on three groups; educators, students, and industry professionals. To obtain a sample of educators, the researchers contacted the International Council of Hotel, Restaurant, and Institutional Education (ICHRIE). ICHRIE is the global advocate of hospitality and tourism education for schools, colleges, and universities offering programs in hotel and restaurant management, foodservice management, and culinary arts. Members of this society represent primarily college educators dispersed across the U.S. and around the globe. Second, students in the hospitality programs at the University of New Hampshire and East Carolina University were contacted. Finally, members of the hospitality advisory board and alumni of the Department of Hospitality Management at the University of New Hampshire were surveyed. These two groups of industry professionals include approximately 580 people representing all sectors of the hospitality industry (lodging, foodservice, etc.).

To collect data from the members of ICHRIE, the URL link and a brief description of the survey was sent by its' research and education staff member to 1,000 member e-mail addresses. For students and industry professionals, the URL link and a brief description of the survey were provided via e-mail. Before data collection procedures began, the questionnaire was pilot-tested with students and educators at the University of New Hampshire's Hospitality Management Program to determine whether the instrument could be understood clearly by respondents and to ensure reliability of the instrument. Slight modifications to the questions and statements were made to add clarity and understanding to the survey instrument.

The questionnaire included five distinct sections. Using questions developed in a previous study (Wade, 1997, 1999) and modified for this research study, the first section assessed all respondents' environmental attitudes. The three sections that followed asked similar questions of each stakeholder group, modified for their unique role. Each section asked respondents what their current status was; for example, students selected if they were a freshmen through and including being a graduate student. College educators could select whether they were a department chair or their rank (e.g. professor, associate, etc.). Finally, industry professionals could select the industry category where they were employed (hotel, foodservice, etc.). A final section asked three demographic questions about gender, age, and zip code.

Study Measures

Environmental Attitude - Following work by Milfont and Duckitt (2004) and Barber, Taylor and Deale (2010), the attitude inventory consisted of 12 questions rated on a Likert-type scale. The

questions dealt with general attitudes regarding the eco-crisis and the balance of nature and were anchored by 1 (strongly disagree) and 4 (strongly agree). Examples of environmental attitude indicators were “The ecological crisis” facing the world has been greatly exaggerated,” and “Mankind is severely abusing the environment.”

Environmental Behavior – Following work by Laroche et al. (2001), Barber et al. (2010), Milfont and Duckitt (2004), and Berenguer et al. (2005). This section contained ten, 4-point, bi-polar scale statements asking the respondents how often they engaged in particular environmentally friendly or unfriendly behaviors. These behaviors included recycling, considering environmental issues when making a purchase, and buying products that damage the environment (i.e. plastic utensils and Styrofoam cups). Each statement was anchored with 4 = “Always” and 1 = “Never”.

Data Analysis

To obtain an overall representation of the sample, descriptive statistics, such as frequencies, means, and standard deviations were employed. Before proceeding to the multivariate analysis, reliabilities of the behavior and attitude scales were evaluated using Cronbach’s alpha coefficients. To test the six hypotheses, a series of ANOVA were then used to determine if statistically significant differences existed between the three stakeholder groups.

Results of the Study

There were 341 total responses with their demographics shown on Table 1. Males represented 51% of the overall respondents and females 49%. College students represented 33% of the respondents, college educators 34%, and industry professionals 33%.

Table 1. Respondent Demographics (n = 341)

	Overall	College Students	College Educators	Industry Professional
Current Position (number of each)				
Freshmen		20		
Sophomore		18		
Junior		35		
Senior		32		
Graduate		7		
		112		
Department Chair			19	
Professor			12	
Associate Professor			20	
Assistant Professor			32	
Senior Lecturer			8	
Instructor/Lecturer			21	
			112	
Hotel/lodging				42
Food Service – Full Restaurant				32
Food Service – Limited Restaurant				15
Clubs and Resorts				18
Travel and Tourism				10
				117
How Interested are the respondents in the following (Hypothesis three)				
Environmental Sustainability	3.1	3.2 ^a	2.9	2.7 ^b
Human Sustainability	2.8	2.9	2.8	2.8
Social Sustainability	3.0	2.8 ^b	3.3 ^a	2.9 ^b
Economic Sustainability	3.0	2.8 ^b	2.8 ^b	3.4 ^a

Note: 1 = means on a 4-point scale with 1 = not very interested and 4 = very interested. Means with a different letter across rows were significant at $p < .00$.

The average age of respondents was 37, with the educators the oldest group ($M = 45$) and college students the youngest ($M = 23$). There were more female students (65%) responding than males, slightly more female college educators (54%) than males, and more male industry professionals (71%) than females. When respondents were asked, on a 4-point scale, how interested they were in environmental, human, social, and economic sustainability, there were significant results. For example, students were significantly more interested in environmental sustainability ($M = 3.2$, $SD = .6$) than the other two groups, $p < .00$, while industry professionals were significantly more interested in economic sustainability ($M = 3.3$, $SD = .5$) than the other two groups, $p < .00$.

Environmental Attitudes and Behavior (Hypothesis one and two)

Forty-seven percent of the respondents reported weak attitudes and 53% strong attitudes. College educators overall had significantly stronger attitudes toward environmental issues ($M = 3.3$, $SD = .4$) compared to students ($M = 2.7$, $SD = .3$) and industry professionals ($M = 2.6$, $SD = .4$), $p < .03$, with educators considering that mankind is severely abusing the environment ($M = 3.0$, $SD = .5$) more so than students ($M = 2.4$, $SD = .9$) and industry professionals ($M = 1.5$, $SD = .7$), $p < .02$.

For environmental behavior, respondents reported that they rarely to sometimes performed the actions assessed ($M = 2.7$, $SD = .3$, on a scale of 1 = never to 4 = always), with switching off lights when leaving a room rarely performed ($M = 1.9$, $SD = .8$) and saving water performed sometimes ($M = 3.3$, $SD = .6$). Interestingly, industry professionals overall reported higher rates of action to support the environment ($M = 2.8$, $SD = .2$), compared to educators ($M = 2.7$, $SD = .2$), and significantly more when compared to students ($M = 2.4$, $SD = .3$), $p < .00$. Industry professionals reported that they turned off lights when leaving a room ($M = 2.6$, $SD = .6$) significantly more than students ($M = 1.9$, $SD = .3$) and educators ($M = 1.4$, $SD = .9$), $p < .00$.

Sustainable Education

To assess how the constituents viewed the importance of environmental issues in hospitality management curricula, respondents were asked to agree with five 4-point Likert-style questions (Table 2). Significant differences between the three groups were reported, with, for example, industry professionals agreeing that sustainability in the hospitality management curriculum was *not* really relevant ($M = 3.4$, $SD = .8$), significantly more than students ($M = 2.7$, $SD = .9$) and educators ($M = 2.7$, $SD = 1.0$), $p < .00$. At the same time, students ($M = 3.3$, $SD = 1.0$) and

educators (M = 3.5, SD = .7) agreed that awareness of sustainability issues was needed in the curriculum significantly more than industry professionals (M = 2.9, SD = .9), $p < .00$.

Table 2. Respondents view of the importance of environmental issues (n = 341) ¹

Hypothesis four	College Students	College Educators	Industry Professionals
Students			
Interesting but not really relevant	2.7 ^b		
We need to be aware of these issues	3.3 ^a		
We need to be thoroughly informed	3.2		
This is essential for hospitality curriculum	2.9 ^b		
Employers will look for this in my educational background	2.6 ^b		
College Educators			
Interesting but not really relevant		2.7 ^b	
We need to make students aware of these issues		3.5 ^a	
Students need to be thoroughly informed		3.4	
This is essential for hospitality curriculum		3.2 ^a	
Employers will look for this in students' educational background		2.7 ^b	
Industry Professionals			
Interesting but not really relevant			3.4 ^a
Students need to be aware of these issues			2.9 ^b
Students need to be thoroughly informed			3.2
This is essential for hospitality curriculum			3.1
Employers Will look for this in students' educational background			3.0 ^a

Note: ¹ = means on a 4-point scale with 1 = strongly disagree; 4 = strongly agree. When comparing importance statements, between stakeholders, means with different letter were significant at $p < .00$.

Respondents were asked to prioritize what topics (see Table 3) they saw as *most or least* relevant to the hospitality management education curriculum. Listed in Table 3 are the top five most relevant and the bottom five least relevant. Included in the top five topics reported were creating sustainable business models, and training and education, each nearly equally reported by the three constituents. Some topics had statistically significant differences between groups. For

example, more industry professionals considered changing consumer behavior and attitudes relevant to the hospitality curriculum (98%) than did college educators (91%) and college students (80%), $p < .00$.

Table 3. Respondents prioritization of relevant topics for hospitality curriculum (n – 341)

Hypothesis five	Overall ¹	College Students	College Educators	Industry Professional
Creating sustainable business models	93%	89%	94%	96%
Training and education	90%	90%	91%	89%
Changing consumer behavior and attitudes	89%	80% ^b	91% ^a	98% ^a
Purchasing principles	88%	81% ^b	88% ^b	94% ^a
Understanding consumer demand	88%	94%	96%	73%
Meaning of life	62%	60%	62%	65%
Food miles	55%	53%	53%	57%
Accreditation schemes	55%	43% ^b	51% ^b	72% ^a
Agenda 21 (policy statements from Rio summit)	54%	45%	41%	76%
UN food policy	51%	50%	48%	53%

Note: ¹ these results are the percentage that selected the topic as most relevant.

Respondents were then asked how sustainability concepts and practices can best be learned in the hospitality curriculum. The seven most significant results of this assessment are reflected in Table 4. Overall, 65% of the respondents selected the lecture format as the best way for sustainability concepts and practices to be learned, with a significant difference between the three groups, with industry professionals preferring lectures (80%) significantly more than college students (59%) and educators (54%), $p < .00$. The least preferred by the respondents, with significant results, was the use of an individual term paper or project (24%). Both industry professionals (32%) and college educators (26%) thought this was more useful than college students (14%). Respondents reported case studies as a significant learning method with educators preferring this case study method (75%) significantly more than industry professionals (63%) and college students (37%), $p < .00$.

Table 4. Respondents Sustainability Concepts and Practices Selection (percentage selecting) (n = 341)

Hypothesis six	Overall	College Students	College Educators	Industry Professional
Lecture	65%	59% ^b	54% ^b	80% ^a
Guest lecturer/speaker	63%	72% ^a	55% ^b	62% ^b
Case studies	57%	37% ^b	75% ^a	63% ^a
Service learning activities or projects	57%	42% ^b	72% ^a	60% ^a
Small group interactive activities	56%	46% ^b	64% ^a	60% ^a
Panel /symposium/forum	26%	12% ^b	46% ^a	36% ^a
Individual term paper or project	24%	14% ^b	26% ^a	32% ^a

Note: = Means with different letter significant at $p < .00$. Items in BOLD significant.

Discussion

This study addressed the questions outlined earlier as well as tested several hypotheses by conducting a survey of hospitality students, industry professionals, and educators about what they believe are the important concepts needed in sustainability education. The goal was to determine similarities and differences in beliefs about sustainability between these constituent groups and then to begin to determine how ongoing communication strategies can be developed allowing for networking among these constituents to encourage collaboration.

Hypothesis one was supported with significant differences between stakeholder groups. Educators had stronger environmental attitudes than the other two groups. The implication of this finding is that with colleges and universities as the facilitators of both training and educating the next generation of industry leaders, having the faculty possess strong environmental attitudes will make the process and acceptance of curriculum modification easier.

Hypothesis two was supported with significant differences between stakeholder groups. Although industry professionals did not have strong environmental attitudes, they did report higher rates of environmental behavior (actions) than the other two groups. This may result from their business perspective of saving money (e.g. turning off lights, saving water, etc.) and positioning themselves towards influencing the business aspects of curriculum development.

Hypothesis three was supported with significant differences between stakeholder groups in how interested they were in sustainability issues. As would be expected, industry professionals were significantly more interested in economic sustainability, while educators were more interested in social sustainability, the idea that future generations should have the same or greater access to social resources as the current generation (Littig & Greissler, 2005).

Hypothesis four was supported with significant differences between stakeholder groups on the importance of environmental issues. Students thought that it was important to be aware of these environmental issues and college educators believed that they need to make students aware; however, college educators felt stronger about how essential these issues were to the hospitality management curriculum. This may be due to the college educators' perspective that insuring that the next generation of industry professionals is well prepared to practice sustainable business concepts and that it is essential for the issues to be discussed and studied in an open but managed forum like a classroom.

Hypothesis five was supported with significant differences between stakeholder groups in their assessments of which topics are relevant and should be included in a hospitality management curriculum. As would be expected, industry professionals reported that the most relevant topics were those related to managing a business, including developing business models, controlling costs, and ethical principles. In contrast, college students considered the most relevant as understanding consumer demand and training and education.

Finally, Hypothesis six was supported with significant differences between stakeholder groups in how sustainability concepts and practices can best be taught in hospitality management programs. Although not significant, the method selected most by all constituents was field trips. Yet overwhelmingly, college educators and industry professionals selected a combination of active, collaborative and individualized learning strategies, such as case studies, service learning activities, panel/symposium methods, and individual projects, while students overwhelmingly selected guest speakers. These results are important because students may gravitate to having guest speakers in their classes for several reasons: they break up the monotony of hearing only one person for the semester, they bring in interesting personalized accounts of ideas and events, their presentations usually receive scant coverage on exams, they serve as a future contact for students' career pursuits, and they are a form of entertainment.

Educational Implications

Those in higher education are uniquely positioned to address the challenges of sustainability by questioning how our society can sustain a high quality lifestyle and provide quality to future generations. Colleges and universities are communities of learning and with this focus comes a responsibility and duty to educate consumers and business professionals. Given the importance of sustainability in its widest scope, it is critical that hospitality management students acquire knowledge of sustainability concepts and skills to practice sustainability within the hospitality industry. Today's students need to be prepared to meet both national and international demands of economic, social, and environmental sustainability issues upon graduation. The major contribution of this research was to highlight the gap between the three stakeholder groups that influence sustainability in hospitality curriculum development and to inform pedagogical approaches that best satisfy each of the constituent groups surveyed for this study. Overall, results indicate that the three stakeholder groups share a sincere interest in this subject matter and provide guidance to educators in not only hospitality management programs, but all business management curricula to develop a best practices pedagogical approach to integrate sustainability into the educational environment. Although sustainability in education was viewed as important by each stakeholder group, it is evident from the results that there are differences in environmental attitudes and behaviors, as well as what topics should be included in the curriculum and how the curriculum should be taught.

To make sustainability in hospitality education meaningful for students and the hospitality industry, the interests of the three stakeholder groups need to be aligned. In turn, these revelations will help improve the environmental, social, and economic sustainable literacy of hospitality management faculty and students, ultimately benefiting the industry.

Industry responsibility in the development of future managers and leaders is a precondition to sustainable policy development and action. This can be accomplished by developing partnerships with industry so that students can examine and explore current good practices. This can stimulate debate, allowing students to formulate their own values and beliefs toward the importance of sustainability. Thus, if hospitality management educators can help students gain the knowledge, skills, and perhaps the personal motivation to be environmentally, economically, and socially proactive thereby becoming effective agents of change, they ensure that the hospitality industry works for a sustainable vision.

To establish a sustainable learning community on university campuses creating C.O.R.E. values (Curriculum, Operations, Research, and Engagement), attention needs to be given to the

perspectives of these three groups, and in addition perhaps further attention needs to be paid to community members' views, as many community-based organizations address sustainability issues on a regular basis. The American Association of Sustainability in Higher Education (AASHE) offers opportunities for universities to share their own efforts in terms of institutional designs and practices, but further attempts need to be made to share educational information via networking opportunities or other means among those involved in disciplines such as hospitality management . For example, while younger people are typically early adopters of social media, at the current time, older people are the becoming more involved in FaceBook and are the fastest growing group using that media (Insidefacebook.com, 2009) Therefore, FaceBook might well have many advantages for use as a networking tool for all three groups. Moreover, the use of other online tools such as blogs and twitter as a means to communicate openly and often about sustainability issues is a possibility that needs to be explored. Tips for successful sharing on social media include telling one's own story—that means making sustainability personal so that it has meaning or interest for viewers from all three groups; sharing regularly so that there is something new often and therefore, interest and attention to the media content is maintained; posting a variety of items from videos to pictures to slideshows to enhance interest; using a variety of sources such as Facebook, twitter, or LinkedIn for businesses; creating a simple blog that is kept up to date with new material and comments on recent posts via wordpress.com; and developing ways for contributors to build partnerships and participate in opportunities offline (Inc.com, 2010).

To better understand and manage complex social-ecological systems, educators from different disciplines, industry professionals from varied businesses, as well as students must collaborate. However, issues related to language and research approaches can make it hard for stakeholders in different fields to work together. Despite increasing interest in and support for interdisciplinary endeavors at universities and funding agencies, few guidelines exist (Pickett, Burch & Grove. 1999). For sustainability to develop and cross interdisciplinary channels, it is important for educators, students, and industry professionals to work together from the earliest stages of curriculum formulation and research design. Models can guide this process. Also the ability to work with people from other disciplines is a crucial skill for young students and faculty members who are striving to improve the health of social-ecological systems for future generations. Finally, given the differences expressed by the stakeholders in this study, collaboration is likely to fail when stakeholders communicate poorly, have unrealistic expectations of one another, and internalize prejudices about unfamiliar academic fields. It is possible that constructing a model together and talking about their underlying assumptions could reduce confusion and ideological confrontations both within and across disciplines.

To address the potential challenges of interdisciplinary cooperation when developing the hospitality management curriculum, an advisory board should be created. If it is comprised of students, educators (not just from hospitality), and industry professionals it may lead to the development of strong relationships that can benefit the creation and maintenance of sustainability in the curriculum.

As an advisory board activity, a university hospitality program might consider developing a sustainability team, composed of a subset industry members, educators, and students, and possibly other additional community members, that could focus on the CORE values. As an initial team activity, perhaps in tandem with an advisory board meeting, a sustainability day could be held, with presentations for and by each of the three stakeholder groups. Community members from across the university and the surrounding region who are already involved in sustainability efforts, such as facilities and design professionals and community waste management specialists, could also be invited to collaborate on the event. The event might spark an interest in sustainability that could grow, much like the Focus the Nation (2010) events that have been held across the US by that grass roots organization. The sustainability events could involve exploring sustainability agendas to focus on issues of particular concern in a particular university community and its greater community environment. In addition, it would be important to provide networking sessions that set aside a time and place for the stakeholders to meet in a collegial setting with each other and then allow the three groups to carry on further communications via electronic media and other means.

How this can translate from the study results? Three of the most important topics for inclusion in a sustainable educational setting, as suggested by the respondents to this study were, “Creating sustainable business models”, “Training and education”, and “Changing consumer behavior and attitudes.” Examples of strategies for developing and managing this new “sustainable team” or network group would be to identify how to set clear definable objectives for addressing these topical issues. This can be accomplished by asking how this group can address these topics and how these objectives can be “SMART” – specific, measurable, attainable, realistic, and in time (Stibich, 2008).

The objectives should be based on a clear understanding of how the feedback loop between the sustainable team and stakeholders is managed. Finally, when developing the objectives consider:

- Listening and learning: monitoring what stakeholders are saying about the issue or programs and using the information to support the goals.

- Build relationships and issues awareness: interacting with key audiences in order to build awareness.
- Content generation and issues awareness: encourage stakeholders to create content about the issues and share it with others, encouraging others to offer feedback (McKeown, 2002).

What is clear is that new, innovative, and simple methods are needed to improve networking between students, industry professionals, and educators in the hospitality and tourism field. Gone are the days when people can simply focus on traditional green policies such as recycling and reducing the carbon footprint, more complex and multifaceted concepts and practices are needed and therefore, faster, flexible, shared information is needed to tackle new issues and to enhance our capability to teach about, learn about, and make informed decisions that influence sustainability in economic, environmental, and social realms around the globe.

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