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Global citizenry, educational travel and sustainable tourism: evidence from Australia and New Zealand

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Educational travel, a neglected area of study in sustainable tourism, has grown substantially over the last 20 years in part as a response to institutional missions to promote international education, but also as a result of the USA's national security concerns to nurture a global citizenry. Considerable future growth is predicted following the bipartisan Lincoln Commission report and under the pending new legislation in the USA. Our pre-test/post-test study of almost 5% ($n = 651$ US students) of the entire short-term, US educational travel market to Australia and New Zealand between 2008 and 2009 revealed significant differences between the cohorts of the two programs, both of which focused on sustainable development. The Australia program not only produced significant increases in global citizenship (as measured by scores on consumer behaviors, support for environmental policies, and environmental citizenship) beyond that of the New Zealand program, but any initial differences between the programs were erased following participation. Reasons for the differences in attitude change are discussed. Analysis also noted key differences between students with different political orientations, but no gender differences. Implications for managing educational travel, marketing Australia's and New Zealand's tourism, sustainable tourism planning, and theory advancements are discussed.

Keywords: educational travel; sustainable development; study abroad

Introduction

There is a small but growing interest in the role of formal (university-led) education in facilitating the potential and realized benefits of sustainable tourism. A recent initiative, the Tourism Education Futures Institute (TEFI, 2009), for example, seeks to develop tourism education programs that "promote global citizenship and optimism for a better world" (p. 4) through values-based teaching based on sustainability (amongst several other) dimensions (see http://www.tourismeducationfutures.org/). TEFI acknowledges that radical changes are needed in the educational system in order to achieve such outcomes and that the existence (and documentation) of effective pedagogical models is critical in this endeavor (see also Gretzel, Isacsson, Matarrita, & Wainio, 2011). While the aim of sustainable tourism is to ensure equitable, just, and enduring outcomes for the multiple entities involved in the tourism system, there is a general paucity of work that has focused on the learning outcomes associated with travel-based educational sustainability programs. Business Enterprises for

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Sustainable Travel Education Network (BEST EN) has successfully developed think tanks (see Lund-Durlacher & Dimanche, 2013; Scarles & Liburd, 2009) to disseminate information about undergraduate curriculum modules, but published evidence of the empirical findings is still lacking. Moreover, virtually all of the previous work has focused on tourism education programs that are concerned with preparing and training a future workforce in the tourism industry.

One notable exception is the volunteer tourism sector, which has identified the critical role of universities (and related academic institutions) in facilitating the desired learning outcomes of volunteering such as global awareness, civic engagement, and international understanding (Lyons & Wearing, 2008; Palacios, 2010; Sherraden, Lough, & McBride, 2008). In recent years, volunteer tourism has broadened into a field of study in itself and one much aligned with the disciplines and industry of tourism and travel. In contrast, educational travel has remained more closely tied to the realms of higher education, and the impact of sustainability-focused academic programs has been barely addressed in the sustainable tourism literature.

Short-term educational travel, the most popular form of study abroad, is emerging as a major tourism opportunity, yet its impact is poorly understood, and the implications for managing and marketing such experiences are generally unknown. The most recent Open Doors report (Institute of International Education, 2012) reveals 273,996 US students studied abroad for academic credit in 2010/11, representing almost 400% growth from c. 70,000 in 1990. Of these, short-term programs dominate with c. 60% of students studying abroad for less than one semester. In 2010/11, Australia (with 9736 US students) ranked as the sixth most popular study-abroad destination behind the UK ($n = 33{,}182$), Italy ($n = 30{,}361$), Spain ($n = 25{,}965$), France ($n = 17{,}019$), and China ($n = 14{,}596$); New Zealand received 2900 US students and ranked 21st overall. At a time when the top five destinations have seen increases in the number of US students traveling to those destinations (averaging 9.9% for all five countries from 2006/2007 to 2010/2011), Australia and New Zealand have experienced sharp declines (−12.1% and −6.3%, respectively, from 2006/2007 to 2010/2011). Such declines are particularly disconcerting since both countries are heavily reliant on the international student education market as an export industry.

Many short-term study-abroad programs are now faculty-led and involve a considerable travel component, incorporating field-based, experiential learning with an increasing number of programs focusing on sustainable development as the academic theme (Donnelly-Smith, 2009; van 't Klooster, van Wijk, Go, & van Rekom, 2008). A primary driver in the growth of educational travel has been institutional commitments to promote study abroad within their academic curricula. According to Stearns (2009), 40% of universities and colleges in the US in 2006 included a reference to international education in their mission statement. This increasing emphasis partly reflects political initiatives and support (including federal legislation) to prepare future American citizens to be sensitive to, and aware of, global and sustainability issues. One such initiative has been the bipartisan Lincoln Commission report to Congress (Commission on the Abraham Lincoln Study Abroad Fellowship Program, 2005) that resulted in the Senator Paul Simon Study Abroad Foundation Act with the goal of increasing the number of US students studying abroad to one million within the next decade (a c.400% increase from today). (The Act, approved by the US House of Representatives in June 2009, as a part of the Foreign Relations Authorization Act for FY 2011, HR 2410, requires Senate approval to move forward.)

Both global competence and national needs were identified as key drivers by the Lincoln Commission. Underlying both is a desire to ensure that the USA remains competitive in an increasingly global marketplace while meeting the triple bottom line criteria, but can also

respond to global issues such as climate change, conflicting resource utilization, economic demands, and national security (Lewin, 2009). Clearly, effectively designed study-abroad programs have potential to deliver on some of these goals but, despite the economic, political, cultural, environmental, and educational implications of advancing such opportunities to the US students, very little empirical evidence of the impact of educational travel programs, particularly in the contexts of sustainability and global citizenry, exists (Brody & Ryu, 2006; Harrison, 2006; Ingraham & Peterson, 2004; McKeown, 2009) and few published studies report evidence using a relatively large representative sample (Chieffo & Griffiths, 2004).

Study abroad and educational travel

Studying abroad is an academic opportunity ranging in length from as little as one week to one year, in which students travel overseas and enroll in host university/college courses, or participate in a home-university-sponsored program, in order to receive credit (McKeown, 2009). Educational travel, the fastest growing sector of study abroad, also known as outbound programs, study tours, island programs, or faculty-led study abroad programs, typically lasts several weeks in duration and increasingly incorporates an experiential, field-based component (Duke, 2000). Engle and Engle (2003) propose that educational tours often constitute the first significant international travel experience for many students and are "of greater intellectual and aesthetic density than that offered by simple tourism" (p. 11), suggesting they are a possible springboard for future travel. The growth in short-term, faculty-led educational travel can partly be attributable to a lower cost (relative to semester or academic year long programs), flexible scheduling (such programs are typically offered during the semester inter-sessions), and opportunity to travel and visit multiple sites and destinations overseas.

McKeown (2009) proposes that "studying abroad for a short time is better than no study abroad at all" (p. 7), while Chieffo and Griffiths (2004) conclude that "short-term programs, even as short as one month, are worthwhile educational endeavors that have significant self-perceived impacts on students' intellectual and personal lives" (p. 174). According to Donnelly-Smith (2009), the duration of study abroad is unrelated to the degree of global engagement that is attributable to the experience. Other studies also substantiate the learning and personal impacts of study abroad, ranging from professional development (Harrison, 2006) to intercultural awareness (Chieffo & Griffiths, 2004), world mindedness (Kehl & Morris, 2007; Lutterman-Aguilar & Gingerich, 2002), intellectual development (McKeown, 2009), and functional knowledge (McLaughlin & Johnson, 2006; Sutton & Rubin, 2004). There is also evidence (albeit limited) that students respond differently to study abroad; notably, students studying abroad for the first time exhibit gains in intellectual development not seen in their peers (McKeown, 2009) and the students' attitudes toward host cultures are dependent on the country visited (Litvin, 2003; Nyaupane, Teye, & Paris, 2008). While Kehl and Morris (2007) report that males exhibited higher levels of world mindedness (a measure of perceived global connectivity) than females, earlier work suggests an opposite effect: female students demonstrate higher cross-cultural awareness than males following study abroad (Carlson & Widaman, 1988). Tarrant (2010) suggests that those toward the left of the political spectrum are more likely to select programs reflecting a stronger environmental orientation, though the impact of studying abroad on political affiliation is not known. In sum, the limited and sometimes contradictory findings on students' characteristics require empirical substantiation of cohort differences among similar programs offered in different

destinations. This is especially imperative as the decision to study abroad is fundamentally a voluntary and self-selected activity (McKeown, 2009).

A criticism of study abroad is that poorly designed overseas programs simply result in academic credit being transferred from one (the host) institution to another (the home) university without using the unique context of the international travel experience as a learning opportunity (Montrose, 2002; Pagano & Roselle, 2009; Peterson, 2002). Moreover, those programs that do build on the travel context "run the risk of massification", in which the study-abroad opportunity has been turned into a commercial product, intensely marketed to students by their own university/college through an increasingly self-financed office of international education (Lewin, 2009). This concern has been exacerbated by administrative goals (reflected in institutions' mission statements) to increase the number of students graduating with an overseas experience, often without considering or substantiating the learning outcomes.

In order to meet the administrative goals of increasing the study-abroad opportunities, the number and range of programs offered at most institutions have increased dramatically in recent years, yet there has arguably been little oversight on the management and delivery of such programs, leading to questions about their academic legitimacy and impact (e.g., Dolby, 2007; Kehl & Morris, 2007; Lutterman-Aquilar & Gingerich, 2002; McLaughlin & Johnson, 2006; Montrose, 2002; Peterson, 2002; Vande Berg, Balkcum, Schneid, & Whalen, 2004). Much of this work recognizes the value of incorporating experiential education and field-based learning in the educational travel experience to attain desired learning outcomes and personal development, and as a potential antidote to the commodification of study abroad (see also Zembach-Bersin, 2009). While short-term educational travel programs are less relevant for building language skills, they clearly have the potential to deliver specific environmental and cultural outcomes that are tied to the travel experience, particularly in sustainable development (given the experiential learning environment) and for those experiencing their first significant international travel opportunity (McKeown, 2009). An area in which such programs perhaps have the greatest potential impact, particularly with respect to the mission statements of universities and colleges, is in nurturing a global citizenry (Dolby, 2007).

Global citizenry

Global citizenship has been identified as the primary outcome of tourism education by TEFI (2009) but has now become an inherent part of the mission statement of many universities and institutions of higher education (Stearns, 2009). There is also a close link between the goals of sustainability (to equitably meet the needs of both present and future generations) and global education (to develop capacities to think and act with a global mindset). Clearly, educational travel programs explicitly focusing on sustainability have, as a primary goal, the promotion of a student citizenry with a global awareness and understanding.

Broadly, citizenship refers to a national identity with special rights and duties prescribed by the respective government; as such a global citizenry cannot be similarly characterized since there is no global government and/or few enduring international laws (Noddings, 2005). Over the past decade, global citizenship has become a highly contested and multi-faceted term (Zemach-Bersin, 2009) in which three key dimensions (or obligations) are now generally accepted: social responsibility, global awareness, and civic engagement (Morais & Ogden, 2011). Schattle (2009) proposes it "entails being aware of responsibilities beyond one's immediate communities and making decisions to change habits and behavior patterns accordingly" (p. 12), while Galston (2001) acknowledges that "it is reasonably

clear that good citizens are made, not born. The question is how, by whom, to what end?" (p. 217).

Consistent with the concept of sustainability, global citizenship commonly refers to an individual's obligations to act in a fair and just manner, and recent studies suggest that the natural environment is where the primary concerns of global citizenry are best considered (Attfield, 2002; Bryant, 2006; Dobson, 2003; Dower & Williams, 2002; Noddings, 2005; Peterson, 2002; Shallcross & Robertson, 2006). Attfield (2002) for example suggests, "environmental responsibilities form the most obvious focus of concern for global citizens, as well as the territory where global obligations most clearly arise" (p. 191). Similarly, the environment provides the basis of Dobson's (2003) post-cosmopolitan view of citizenship, as an obligation to reduce our ecological footprint to sustainable levels, i.e., to act as an "Earth citizen" (p. 99). The global nature of many environmental issues such as climate change, the supply and distribution of renewable and non-renewable resources, and biodiversity and species loss transcend national boundaries with effects distributed across the planet. It follows therefore that the civic concern expressed by citizens most appropriately concerns the sustainable use and conservation of earth's resources. As such, global citizens are not simply international because of world travel but as a result of their ecological footprint – the quantity of nature (specifically, the amount of natural resources) required and consumed to sustain their lifestyle choices and behaviors.

Stern, Dietz, Abel, Guagnano, and Kalof (1999) have identified three levels of environmental behavior that reflect non-activist citizen support for the environmental movement: (1) changes in personal behavior and consumption (e.g., reductions in energy use and purchases of environment-friendly products), (2) support for public environmental policies (especially that require material sacrifice to achieve environmental goals), and (3) low commitment active citizenship (activities such as joining environmental organizations and writing political officials). The scales utilized in each of these three levels represent the culmination of over a decade's work in predicting pro-environmental behavior by Stern and his colleagues (see for example, Black, Stern, & Elworth, 1985; Guagnano, Stern, & Dietz, 1995; Stern, 2000; Stern & Dietz, 1994; Stern, Dietz, & Black, 1985; Stern, Dietz, & Guagnano, 1995; Stern, Dietz, & Kalof, 1993; Stern, Dietz, Kalof, & Guagnano, 1995) and imply that human responses to global environmental problems may adopt any or all three of the distinct behaviors.

The tie between study abroad/educational travel and global awareness (an attitudinal measure of world mindedness) is well documented (e.g., Donnelly-Smith, 2009; Kehl & Morris, 2007; Stearns, 2009), but the relationship with global citizenry (as a behavioral concept) is much less well known (refer to Annette, 2002; Dolby, 2007; Lutterman-Aguilar & Gingerich, 2002). It has been suggested that programs with significant experiential and sustainability components have the greatest potential to nurture such a citizenry because they facilitate learning through a triad approach of subject matter, practice, and context (Pagano & Roselle, 2009). While there exists an entire field and critical discourse on experiential education, most agree with Dewey's (1963) assertion that "for learning to take place and be considered educational, the experience has to be transformed into knowledge by means of action or reflection". Clearly, educational travel programs offering transformational international experiences that are both action-oriented and relate global sustainability issues to local context have significant implications for facilitating global citizenry.

Research questions

Our study explores the effect of an educational travel program focusing on sustainable development and offered in one of two destinations, Australia or New Zealand, in nurturing

global citizenship. The two countries, often perceived by American students as being quite similar, represent stark differences in politics, culture, and the environment. Australia, an island continent of similar size to the contiguous USA, has the world's longest living civilization (the Aborigines possibly arrived in Australia 40,000 years ago) and extensive natural resource base. In contrast, New Zealand, only slightly larger geographically than the state of Florida, is considered the most recently colonized country in the world (the Maori population is thought to have inhabited the lands for only ~800 years), and a mountainous, volcanic (though dormant in the South) chain of islands. Both countries are English-speaking and have reputations as quiet, stable cultures that pose limited economic or strategic threat (Curthoys, 2000). Consequently they represent ideal regions of the world to study sustainable development and for students (and their families) considering studying abroad for the first time. For such students, the decision to study abroad in Australia or New Zealand does not necessarily reflect a selection between quite disparate destinations, such as India or Australia, rather it results from a more basic question: *is study abroad right for my son or daughter?*

We examine two fundamental questions, which are as follows.

(1) How do the US students who self-select to study abroad in Australia differ from students who self-select to study abroad in New Zealand on personal characteristics, i.e. political orientation, gender, and past experience?
(2) How does studying abroad in Australia versus New Zealand influence students' levels of global citizenry?

Methods

Sample and research design

Students from 10 US universities participated in a four-week educational travel program, on the theme of sustainable development, to either Australia or New Zealand in May, June, or July in 2008 or 2009. A pre-post design was used in which students voluntarily completed a survey instrument on the first day (pre-test) and last day (post-test) of the program in the destination country.

Program design

Both educational travel programs are interdisciplinary and focus on sustainable development. They adopt a modular-based approach that reflects the tenets of experiential education, i.e. learning that is thematically grounded, incorporates applied fieldwork and is both action-oriented and issues-based. As such the programs seek to transform how students view themselves, the world, and their role in it. These goals are met by emphasizing a global knowledge, connectivity, and understanding of human–environment interactions (from multiple disciplines and geocultural perspectives) and the responsibility of humans to global issues. All students enroll in the same academic courses that reflect a mix of social and environmental sciences and utilize a combination of classroom lectures, fieldwork (including research/monitoring and service-learning projects), informal seminars, and field travel (cultural and environmental-oriented activities and trips). Essentially, the programs are identical in academic focus (i.e. same syllabus and course objectives) and delivery (instructional format) with the only difference being the context (geographic location).

The primary form of assessment is a series of 250-word essay questions (grouped according to four sub-themes) addressing relatively complex ecological, environmental, and social issues related to sustainability. Each module sub-theme is comprised of a short narrative/introduction, a series of readings, and a collection of classroom lectures, seminars, and field activities. In Australia the four sub-themes are cultural adaptations to the Australian landscape, sustaining nature and human societies, managing marine resources, and indigenous relations with the landscape. The four sub-themes in New Zealand are colonizing and decolonizing the environment, the human dimensions of environmental management, preservation and sustainable use, and indigenous relations with the landscape. The questions require students to formulate new values and beliefs about human–environment relations through a critical analysis of the information that requires them to rethink ways in which they have traditionally viewed the world. All of the educational material (field and classroom) is directed toward the module questions and facilitated by locally trained instructors/field guides, with instruction supplemented by the home university faculty.

The Australian field sites represented four key locations either in southeast or far northeast Queensland (listed respectively as follows): rainforest (Lamington National Park or Daintree National Park), Great Barrier Reef (Lady Elliot Island or Green Island), outback (Carnarvon Gorge or Atherton Tablelands), and urban environment (Brisbane or Townsville). In New Zealand, all programs were conducted on the South Island and included: high altitude/montane ecosystem (Mount Cook/Aoraki National Park), Gondwana remnant forest (Fiordlands World Heritage Area), glaciers (West Coast), coastal and marine environments (Abel Tasman and Kaikoura), and urban environment (Christchurch and Queenstown).

Variables

Global (environmental) citizenry (pre-test) was measured using three scales: (1) seven items reflecting Environmental Citizenship (EC) (from Stern et al., 1999) with a response scale of "Yes" or "No" used to measure citizen engagement; (2) three items of Support for Public Environmental Policies (SPEP) measured on a 7-point scale from 7 ("Strongly agree") to 1 ("Strongly disagree") with a mid-point of 4 ("Neither agree or disagree" was used as a measure of civic responsibility) (Stern et al., 1999); and (3) 10 items selected from the 29-item, six-factor Ecologically Conscious Consumer Behavior (ECCB) scale (Roberts & Bacon, 1997) with a 7-point response scale from 7 ("Always true") to 1 ("Never true"), used to represent the consumptive dimension of citizen engagement. The first two scales have reported/published internal reliabilities (alpha) of .77 (EC) and .78 (SPEP) (see Stern et al., 1999). The 10 items selected from the ECCB represent four of the six factors in the original scale: two items from the oil/driving factor, three items reflecting general recycling behavior, three items of general environmental consumption, and two items from the electricity-saving factor. (The remaining two factors in the ECCB measure the use of recycled paper products and the use of efficient light bulbs, and were removed because of perceived overlap with existing items and space limitations on the survey instrument.) All selected ECCB items had reported loadings on the respective factors between .65 and .95 (Roberts & Bacon, 1997). (Roberts and Bacon's ECCB scale was selected over Stern et al.'s environmental consumption measure [reported alpha of .72] because it demonstrated higher internal consistency.) Higher scores on all three scales indicate greater levels of global (environmental) citizenry.

Global citizenry (post-test) was measured using the same three scales, but the response format for the EC and ECCB was different to that asked in the pre-test. In the post-test EC

and ECCB, respondents were asked to indicate how likely is it that they will perform the respective behaviors in the next 12 months on a 7-point Likert-type scale from 7 ("Extremely likely") to 1 ("Not at all likely"). Item statements were modified to reflect a future intention to act; for example, instead of "To save energy, I drive my car as little as possible" (ECCB pre-test item), the revised item read "To save energy, I will drive my car as little as possible" (ECCB post-test item). Only the SPEP items used the identical (agree/disagree) response scale, meaning that a pre-test/post-test change analysis could not be performed with the EC or ECCB scales. A list of the individual items for each of the three global citizenry scales is shown in Table 1.

Political orientation was assessed by asking respondents to indicate the party that best describes their political orientation, with "Green" on the far left and "Libertarian" on the far right and "Democratic" and "Republican" at one-third and two-third intervals, respectively. Scores were assigned as follows: 1 = Green, 2 = Democrat, 3 = Republican, and 4 = Libertarian. Gender was self-reported, male or female. Past study-abroad experience was measured by asking the following question: "Have you previously participated on a study-abroad program? If yes, please state the country(ies) and the year(s) you participated".

Analysis

Significance for all statistical tests was set at $p = .05$ and analysis was conducted using SPSS version 17.0 (2009). Levene's statistic tested for equality of variance in the samples. Items within each of the EC, SPEP, and ECCB scales were summed and Cronbach's alpha was used as an indicator of internal consistency for each of the scales separately. A Chi-square analysis was conducted to examine differences in gender (male or female) and levels of past experience (yes or no). An independent sample *t*-test was used to explore the differences in political orientation.

Differences in the pre-test and post-test scores on the EC and ECCB, between the students on the Australia versus the New Zealand programs, were analyzed using independent sample *t*-tests, and a repeated-measures MANOVA was used to test for differences in the pre-test and post-test scores on the SPEP between the students on the two programs. While there is considerable evidence that behavioral intentions approximate actual behavior (e.g. Ajzen, 1989; Ajzen & Fishbein, 1980; Bickman, 1972; Fishbein & Ajzen, 1975; Hines, Hungerford, & Tomera, 1987; Schwartz & Tessler, 1972; Weigel, 1983), the two different response scales for the EC and ECCB items meant that a within-subjects (repeated measures) analysis could not justifiably be performed on these two factors.

Results

Of a total of 695 students, 651 respondents completed both the pre-test and post-test, generating a response rate of 93.7%. The majority of the sample was female (68.3%), almost two-thirds (64.8%) participated in the Australia program, less than one in 12 students (7.8%) had prior study-abroad experience, and their political orientation was fairly evenly divided between Left and Right: 6.4% ($n = 41$) Green, 45.7% ($n = 294$) Democrat, 42.5% ($n = 273$) Republican, and 5.4% ($n = 35$) Libertarian. (These four categories were subsequently collapsed into two categories of Left and Right because of the relatively low sample size in each of the extreme poles.) Levene's test showed no significant difference in the variances for each group in the *t*-test and variances were therefore assumed to be equal. Pre-test and post-test global citizenry scales demonstrated internal reliabilities (Cronbach's alpha),

Table 1. Cronbach's alpha for items in the environmental citizenship (EC), support for environmental policies (SPEP), and ecological conscious consumer behavior (ECCB) scales.

Scales and items	Alpha (Pre-test)	Alpha (Post-test)
Environmental Citizenship (EC) scale[1]		
Read any newsletters, magazines or other publications written by environmental groups	.55	.73
Sign a petition in support of protecting the environment	.56	.79
Give money to an environmental group	.41	.78
Write a letter or call your member of Congress or another government official to support strong environmental protection	.50	.73
Boycott or avoid buying products of a company because you feel that the company is harming the environment	.60	.75
Vote for a candidate in an election at last in part because (s)he was in favor of strong environmental protection	.60	.79
Become a member of any group whose main aim is to preserve or protect the environment	.63	.84
Support for Policy Initiatives (SPEP) scale[2]		
I would be willing to pay much higher taxes in order to protect the environment	.90	.92
I would be willing to accept cuts in my standard of living to protect the environment	.88	.89
I would be willing to pay much higher prices in order to protect the environment	.93	.92
Ecological Conscious Consumer Behavior (ECCB) scale[3]		
To save energy, I will drive my car as little as possible	.66	.69
To reduce our reliance on foreign oil, I will drive my car as little as possible	.64	.67
I will use a recycling center or in some way recycle some of my household trash	.52	.69
I will convince members of my family or friends not to buy some products which are harmful to the environment	.76	.84
I will try to only buy products that can be recycled	.81	.85
I will switch products for ecological reasons	.82	.87
When I purchase products I will always make a conscious effort to buy those products that are low in pollutants	.84	.86
I will not buy household products that harm the environment	.68	.78
I will buy high-efficiency light bulbs to save energy	.57	.68
I will purchase household appliances which use less electricity than other brands	.58	.73

[1]Response scale for pre-test of "Yes" or "No" and for post-test of 1 ("Not at all likely") to 7 ("Extremely likely"). Note: For dichotomous scales, Cronbach's alpha is the same as Kuder-Richardson (1937).
[2]Response scale for pre-test and for post-test of 1 ("Strongly disagree") to 7 ("Strongly agree").
[3]Response scale for pre-test of 1 ("Never true") to 7 ("Always true") and for post-test of 1 ("Not at all likely") to 7 ("Extremely likely").

respectively of .64 and .89 (EC), .87 and .90 (SPEP), and .88 and .92 (ECCB). Table 1 shows factor loadings of each item on the respective scale.

There was no significant difference for gender (Chi-square = .28, $p = .594$), suggesting that males and females were equally as likely to select to study abroad in Australia as New Zealand, but those with past study-abroad experience were significantly more likely to select New Zealand over Australia (Chi-square = 9.64, $p = .002$). Students who had selected the Australia study-abroad program (mean = 2.55) were significantly more likely

Table 2. Comparison of study-abroad students to Australia and New Zealand on environmental citizenship and ecologically conscious consumer behavior.

	New Zealand			Australia				
	Mean	SD	*n*	Mean	SD	*n*	*t*-test	*p*
Environmental citizenship (pre-test)	2.47	1.76	203	1.89	1.56	374	3.93	<.001
Environmental citizenship (post-test)	30.27	9.51	207	31.34	8.93	386	−1.36	.174
Ecol. consumer behavior (pre-test)	41.29	11.45	204	38.76	11.87	369	2.47	.014
Ecol. consumer behavior (post-test)	48.17	48.17	205	52.13	10.83	385	−4.05	<.001

than students in New Zealand (mean = 2.41) to consider themselves more toward the Right of the political orientation spectrum (t-test = 2.14, $p = .033$).

Table 2 shows results of the t-test for the pre-test and post-test scores of the EC and ECCB. Students in Australia exhibited significantly lower EC (t-test = 3.93, $p < .001$) and ECCB scores (t-test = 2.47, $p = .014$) prior to the program than the New Zealand study-abroad students. However, upon completion of the respective programs, Australia students reported significantly *higher* ECCB scores (t-test = 4.05, $p < .001$), and their EC scores were no longer different to those of students in the New Zealand program.

A repeated-measures MANOVA (Table 3) revealed a significant country (Australia versus New Zealand) by program (pre-test versus post-test) interaction effect ($F = 12.93$, $p < .001$), suggesting that the Australia program had a greater (positive) effect on the SPEP scores (pre-test to post-test) than did the participation in the New Zealand program. Significant main effects for country ($F = 44.14$, $p < .001$) and program (pre-program vs. post-program) ($F = 3.60$, $p = .05$) were not interpreted in light of the significant interaction effect.

Finally, we should acknowledge the relatively large sample size for the study. Across the two-year sampling period almost 2.5% ($n = 651$) of all the US students studying abroad in Australia (n = 11,140 in 2008 and 9962 in 2009) or New Zealand (n = 2769 in 2008 and 3113 in 2009) participated in the study. Assuming that slightly less than 60% of all the study-abroad travel is short-term (less than one semester in length), approximately one in 20 students who studied abroad on short-term programs in Australia or New Zealand in 2008 and 2009 were represented in our sample. While our sample was not randomly selected from the entire population of all the US students studying abroad in the two countries (and therefore, issues of non-probability sampling bias arise – see below), the relatively high proportional representation of the population, coupled with the high sample size (generally, a sample size of 400 is considered acceptable where the population exceeds 5000, see

Table 3. Mean scores of study abroad students to Australia and New Zealand on support for public environmental policies.

	New Zealand			Australia		
	Mean	SD	*n*	Mean	SD	*n*
Support Public Environmental Policies (pre-test)	13.76	3.75	207	12.72	3.80	375
Support Public Environmental Policies (post-test)	14.15	4.10	207	14.04	3.71	375

Cochran, 1963), suggest that the findings nevertheless warrant the interpretation as a highly relevant case study. Indeed, in applying an alpha of .05, a sample of 651 cases will yield power coefficients close to 1.0; typically 0.8 is considered acceptable (Cohen, 1989).

Conclusions and discussion

The Australia program not only produced increases in global citizenship (as measured by scores on consumer behavior, support for environmental policies, and environmental citizenship) significantly beyond that of the New Zealand program, but any initial differences between the programs were erased following participation. At least three plausible explanations may be offered. First, the two programs appeared to attract a different set of students. While there was no difference in the gender make-up of each program, Australia appealed to students studying abroad for the first time and to students more likely to rate themselves on the Right of the political spectrum, as compared to the students in New Zealand. Unfortunately, no additional details on the personal characteristics of students were available to shed further light on this proposition.

A second argument is that *something* about the Australian educational travel program generated changes in global citizenship for that particular group of students that did not produce a change for the group of students in New Zealand. While the academic structure and delivery format of the two programs were identical, there were (obviously) differences in the destinations (e.g. reef versus glaciers, rainforest versus fiords, and outback versus mountains) as well as in the university faculty (and local field guides) who participated.

A third explanation, however, is more plausible: the Australian program appealed to a particular group of students who were more responsive to the theme of the program than students in the New Zealand program. New Zealand students received a message about sustainable development that had only limited impact on their intentions to act as global citizens, while students in Australia, perhaps because they had a relatively low intention level initially, were far more receptive to future changes in behavior. This raises two questions: (1) why did Australia appeal to first-time study-abroad students and those politically oriented to the Right; and (2) why did students in the Australia program respond in the manner in which they did, relative to the students in New Zealand?

In addressing the first question, Australia and New Zealand's images and appeal as tourism destinations to the US students are arguably a reflection of their respective overseas marketing efforts. During the time period most relevant to the present study, Tourism Australia marketed Australia using the brand, *So Where the Bloody Hell Are You?* (March 2006 to May 2010). Surrounded in controversy over the use of the word *bloody* and focus on alcohol consumption, this brand was ultimately considered a failure, causing former Australian Prime Minister Kevin Rudd to conclude that the campaign was a "rolled gold disaster" (*Sydney Morning Herald*, June 24, 2008) and others to suggest an identity crisis (Knowedge@Australian School of Business, 2010). In contrast, Tourism New Zealand has relied on the same brand slogan, *100% Pure New Zealand*, since 1999 (though modified in 2010 to become *New Zealand 100% Pure You*). *100% Pure* has arguably been one of the most successful international tourism campaigns in history, portraying New Zealand as a clean, green, environment-friendly destination, captured by its "stunning landscapes and awesome scenery" (Tourism New Zealand, n.d.).

One argument is that the New Zealand brand appealed to the US students with a strong environmental value orientation (based on the clean, green image of the destination), while Australia attracted students with a much broader value orientation (reflecting a diffuse cultural and natural image). Given that environmental concern has previously been

associated with a more liberal (i.e. less conservative) political affiliation (see Dunlap, Van Liere, Mertig, & Jones, 2000; Engel & Plötschke, 1998; Kilbourne, Beckmann, Lewis, & van Dam, 2001; Olofsson & Ohman, 2006; Samdahl & Robertson, 1989), it is not surprising that the New Zealand program attracted students with views more toward the Left of the political spectrum. In addition, since previous overseas travel experience is related to greater international awareness and perceived intercultural competence (McKeown, 2009), it is understandable that the US students who had not traveled internationally would be more drawn to a destination with broader cultural and societal appeal (Australia) than with a relatively strong environmental orientation (i.e. New Zealand), as reflected by their respective destination brand images.

Clearly, students in Australia had greater potential for growth in global citizenship simply because they began the program at such a low level relative to the students in New Zealand. Consistent with Wexler (2008), issues of sustainable development may have been sufficiently novel to students in Australia such that any new information would have been elaborated upon (Petty & Cacioppo, 1981, 1986), while the course material in the New Zealand program may only have reinforced existing beliefs for those students with prior knowledge. Petty and Cacioppo's Elaboration Likelihood model has been widely applied to explain attitude and behavior change in many different contexts and it proposes two routes to persuasion: central and peripheral. In the former, change arises from cognitive elaboration/systematic thinking of a message/information while the peripheral route relies on affective cues/non-elaboration processing such as attractiveness of the course and the delivery mechanism. While we cannot substantiate information elaboration as the source of behavior intention change for students in Australia, it is plausible that because the New Zealand program appealed to students who already demonstrated strong support for global citizenry and pro-environmental behaviors, any messages consistent with this pre-existing belief structure may not have generated new beliefs that would have led to further changes in the behavior intention. A similar assertion has been proposed by Wexler (2008) who argues that first-time international travel experiences can cause students to restructure their internal world to match the external (study abroad) environment; consequently, any ensuing learning outcomes (in Wexler's case, gains in intellectual development) are greatest for those individuals for whom the external and internal worlds differ significantly.

Limitations

Before discussing implications for destination marketing as well as for managing educational travel opportunities in sustainable development, at least three limitations to the study should be acknowledged. First, sampling bias is a concern. Students self-select to study abroad and while the 10 universities included broadly represent a breadth of public (mostly large land-grant) tertiary education institutions in the USA, we did not randomly sample from all the US students studying abroad in Australia and New Zealand. Not only would this have been extremely difficult, but, controlling for the effect of program variability (in length, academic topic, and/or location) would have meant an extensive sampling design and (improbable) access to all university programs across the country. In our study, however, we can make inferences about the US students studying abroad in Australia or New Zealand on faculty-led educational programs focusing on sustainable development – arguably, a topical theme given the emphasis of the respective destination brand images.

A second limitation concerns the predictive validity of behavior intention. The post-test measure for all three dependent variables reflected an intention or predisposition to act in the future; i.e., the EC and ECCB scales asked respondents to indicate how likely

they would be to perform the respective behavior in the next 12 months while the SPEP statements asked the respondents to indicate their willingness to act at some time in the future. The predictive validity of behavior intention, as a measure of future behavior, has been a topic of interest in the social–psychological and consumer-behavior literature for some time and for a wide range of behaviors. While there remains some skepticism about the consistency of the relationship, most studies support the general conclusion that intention has some limited explanatory influence on future behavior (see for example, Ajzen, 1989; Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975; Sommer, 2011). In a meta-analysis of 28 research hypotheses predicting future condom use, Sheeran and Orbell (1998) reported medium to strong correlation (average $r = .44$) between intentions and actual behavior, while a broader meta-analysis by Sheeran (2002) of a wide range of behaviors, reported an explained variance of 28% in behavior.

Third, no open-ended questions were included or follow-up interviews completed for the dataset that could be tied to the closed-ended questions. Students completed four essay questions addressing the general transformational nature of their study-abroad experience (e.g. reflecting on your study-abroad experience, what did you learn about yourself as an American) but given the anonymity of the survey, their qualitative responses were not matched with the quantitative measures reported in the present study. Clearly, pre-test and follow-up open-ended questions concerning perceived differences in destinations would yield important insights into the quantitative findings.

Implications

Very little is known about the student educational travel sector, yet it has emerged as the dominant form of study abroad and has grown substantially in popularity over the past two decades. While only about 2% of all the US students currently study abroad (Donnelly-Smith, 2009), this translates into over 270,000 students annually and is expected to increase almost four-fold with the anticipated passage of the Senator Paul Simon Study Abroad Foundation Act. Countries such as Australia and New Zealand rely on international education for export revenue (Barron, 2006; Withers, 2010), as do individual universities; they face increasing competition from other destinations, and need to understand this niche market if they are to maintain their market share.

The overseas study tour market is seen as a strategic growth area for Australian and New Zealand tourism (see New South Wales Joint Ministerial Taskforce on Education Tourism, 2009; Ritchie, Carr, & Cooper, 2003). But given global trends, such as stronger (higher world ranking) academic institutions in Asia, heightened security and immigration issues, and the increasing costs of Australian and New Zealand degree programs because of currency movements, recent declines in international student numbers to those countries may continue. This study therefore provides important market research about future developments (Barron, 2006; Son & Pearce, 2005) but also substantiates *why* overseas institutions should send students to these destinations. That research is especially important in a wider sense: it shows that a study tour to Australia/New Zealand can yield important learning outcomes with respect to enhancing awareness of sustainability and in nurturing a global citizenry – critical platforms for developing future sustainable development, and sustainable tourism, as well as a niche market in the competitive study abroad environment.

This research demonstrated that educational travel can nurture global citizenship, a range of behaviors that promote environmentalism, civic engagement, and social justice (Winn, 2006). The benefit of educating students as global citizens is not only that, as a

society, we begin to actively address issues of global sustainability (and reduce our individual and collective ecological footprints), but that such students, perhaps for the very first time, consider their role as US citizens (Dolby, 2007; Susnowitz, 2006). It is critical, therefore, that educational travel opportunities do not become over-commercialized and commodified as tertiary institutions increasingly seek to self-finance study abroad and promote it for economic gain. Whether it be students themselves who treat their college education as a commercial product or offices of international education that promote consumerism in study abroad (Lewin, 2009; Zemach-Bersin, 2009), ensuring that the academic structure and delivery mechanisms of such programs remain true to the principles of experiential education (a triad of subject matter, practice, and context) is critical. Therefore, we empirically substantiate the argument offered by Lutterman-Aguilar and Gingerich (2002) that "study abroad and experience education are natural partners because they share the common goal of empowering students and preparing them to become responsible global citizens" (p. 46). Educational travel should not become a form of service tourism, dominated by third-party service providers motivated primarily by commercial endeavors. Educational administrators need to understand both the academic and market dimensions of educational travel to effectively design and deliver programs that ensure that the highest level of learning outcomes are achieved, including promoting global citizenry.

Within that process, tourism agencies and service providers need to account for the global impact of travel. The greenhouse gases and carbon emissions associated with long-haul air travel to Australia and New Zealand require that they, perhaps more than other destinations, need to promote sustainable tourism. Consistent with Dwyer's conception of an *ideal tourist* as "one who encapsulates all three measures of sustainability: environmentally considerate, socially benign and consistent with the local population's values, and economic or high spending" (cited in Knowedge@Australian Business School, 2010), the US educational travel market, in nurturing a global citizenry, will be a key business segment.

Finally, the implications of the study findings for theory include advancements in two key areas. First, the conceptual relationship between educational travel (and demonstrable key learning outcomes) and sustainable tourism needs to be more fully articulated. As a growing number of institutions are becoming more actively involved in educational travel (including volunteer tourism, cultural exchange, or service-learning), programs with a strong sustainability focus (in practice and/or in pedagogy) are clearly situated within the domain of sustainable tourism. In particular, programs that foster sustainability principles such as global citizenship, civic responsibility, and social obligations, are critical dimensions that require more understanding in the ultimate pursuit of peace and equity through tourism. Second, the role of elaboration in the attitude–behavior relationship requires further consideration. This study shows that little is known about the choices students made in their decisions to study abroad, or in the role of marketing in influencing their decisions. The Elaboration Likelihood model (Petty & Cacioppo, 1981, 1986) is one application which Australia and New Zealand tourism planners may find particularly useful in understanding the effectiveness of their respective promotional campaigns and product development work.

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