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The Added Value of Study Abroad: Fostering a Global Citizenry

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Abstract

Few studies have employed experimental designs adequate for documenting the value added of studying abroad; that is, learning outcomes above and beyond that which may be achieved in domestic or traditional campus-based courses. Using a pre-/posttest, two-by-two factor design of course location (study abroad vs. home campus) by course subject matter (sustainability vs. nonsustainability), we found significant highest order interactions for three dependent measures of global citizenry. Results suggest that it is the combination of location (abroad) and academic focus that yields the greatest increases in specified learning outcomes for study abroad. Implications for political agendas, academic initiatives, and research directions are discussed.

Keywords

study abroad, internationalization of higher education, globalization and international higher education, internationalization of the curriculum, strategic institutional management of internationalization

Introduction

Despite calls to strengthen the accountability of education abroad through rigorous scientific research (e.g., Chieffo & Griffiths, 2004; Ingraham & Peterson, 2004; McKeown, 2009; McLeod & Wainwright, 2009; Sutton & Rubin, 2004), few studies have used experimental designs adequate for documenting the *value addition* of studying abroad; that is, learning outcomes above and beyond that which may be achieved in domestic or traditional campus-based courses. Such evidence is important given

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growing political interest in international education and increasing reference to globalization (and the need to prepare students as global citizens) in the missions of academic institutions (Hovland, 2009). In the present study, we attempt to adhere to best practices in quantitative study abroad research by adopting a quasi/field-experimental (pretest/posttest) design with control/comparison groups to empirically investigate the extent to which short-term faculty-led education abroad programs can foster global citizenship.

Background

The past 25 years have witnessed growing numbers of students participating in study abroad programs of varying durations, locations, and academic foci. Most recent estimates indicate that of the approximately 270,000 U.S. students who studied abroad for academic credit in 2009-2010 (as compared with only about 75,000 students in 1990), the majority (57%) were short term (summer or 8 weeks or less), with four European countries (United Kingdom, Italy, Spain, and France) ranking as the most popular (and 6 of the top 10) destinations, and social sciences (22%) and business students (21%) collectively representing almost one half of all students abroad (Institute of International Education, 2011). While short-term programs, the largest and fastest growing segment of the market, have been criticized for being academically light (c.f., McKeown, 2009), they appeal to large numbers of undergraduates without prior international travel experience and/or who lack the funds or time for extensive (one semester or more) education abroad opportunities (Donnelly-Smith, 2009; Long, Akande, Purdy, & Nakano, 2010; Mills, Deviney, & Ball, 2010; Tarrant, 2010). Short-term programs thereby may provide a springboard for future, more in-depth travel (Engle & Engle, 2003), a pathway for those studying abroad for the first time (McKeown, 2009), and perhaps "the only realistic alternative in terms of the demands of your degree studies and economic resources" (Institute of International Education, 2007; p. xxxiii). As such, short-term programs may be viewed as crucial for achieving broad and more egalitarian access to study abroad for U.S. undergraduates.

Universities and colleges arguably have a responsibility to develop international curricula that foster a student citizenry with stronger global awareness, either as a consequence of their educational mission (e.g., Braskamp, Braskamp, & Merrill, 2009; Childress, 2009; Hanson, 2010; Hovland, 2009; Lewin, 2009; Stearns, 2009), in response to political calls for enhanced national security (Commission on the Abraham Lincoln Study Abroad Fellowship Program, 2005; Durbin, 2006; Government Accountability Office, 2007), in providing greater employment opportunities for their graduates (Association of American Colleges and Universities, 2007), or simply in heeding the American public's growing interest in the importance of promoting global mindedness among future generations (Norris & Gillespie, 2009). Senator Richard J. Durbin (2006), for example, argues "it is the responsibility of the American educational system to engage students in global education" (p. 6). Similarly, the bipartisan Lincoln Commission (2005) reports,

> Our national security and domestic prosperity depend upon a citizenry that understands America's place in the world, the security challenges it faces, and the opportunities and perils confronting Americans around the world. Responding to these realities requires a massive increase in the global literacy of the typical college graduate. (p. ix)

From a more academic orientation, Braskamp and colleagues (2009) suggest "student engagement in education abroad experiences enhances global learning and development, which we argue should now become an important and even the core of holistic student development, a goal of almost every undergraduate college or university" (p. 111).

Yet, to date, the academic response to calls for greater global learning has focused primarily on increasing quantity; the number of students participating in education abroad is often the primary indicator of an institution's success in achieving globalization aims (Engle & Engle, 2003; McLeod & Wainwright, 2009). Clearly, a major driver of such efforts should also address the added value and outcomes of studying abroad as indexed by measures more informative than traditional course evaluation responses such as instructor effectiveness, overall satisfaction, and use of appropriate instructional techniques. In moving toward more robust evidence of the value of education abroad, particularly with respect to globalization, we need to design research that can clearly demonstrate whether studying abroad (relative to home campus) can promote higher order outcomes (such as global citizenship) and, if so, under what conditions.

Global Citizenship Examined

Although "global citizenship" is a highly contested and multifaceted term (Hanson, 2010; Zemach-Bersin, 2009), three key dimensions, at least within the study abroad literature, are now commonly accepted (Morais & Ogden, 2011; Schattle, 2009): (a) social responsibility (concern for others, for society at large, and for the environment), (b) global awareness (understanding and appreciation of one's self in the world and of world issues), and (c) civic engagement (active engagement with local, regional, national, and global community issues). In one of the most thorough reviews of the global citizenship concept in the study abroad scholarly field, Schattle (2009) proposes that it "entails being aware of responsibilities beyond one's immediate communities and making decisions to change habits and behavior patterns accordingly" (p. 12).

Outside the study abroad literature, there is consensus that the natural and built environment is the context in which global citizenship can be best understood (e.g., Attfield, 2002; Bryant, 2006; Dobson, 2003; Winn, 2006), as environmental concern not only benefits others beyond the individual but also invokes a sense of obligation toward others. According to Dobson (2003), the environment constitutes a *community of obligation* in which social responsibilities and behaviors extend, in the form of an ecological footprint. In distinguishing between a Good Samaritan (i.e., based on charity) and a Good (*Earth*) Citizen (i.e., based on obligations), Dobson argues "the idea of the

ecological footprint converts relationships we had thought to be Samaritan into relationships of citizenship" (p. 105). Citizens, then, are not merely global by reason of their international travel, but as a result of their pro-environmental behaviors that make a sustainable impact. Similarly, Attfield (2002) 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). In a similar vein, Winn (2006) considers the concept of global citizenship to include "behaviors associated with the global issues of environmentalism, social justice, and civic participation" (p. 124).

In the broader social-psychological field, the work of Stern and his colleagues has significantly advanced our understanding of public support for the environmental movement. This line of scholarship adopts a normative approach that is based on the highly influential work of Schwartz (1973, 1977). Under the norm-activation model, an individual who believes that (a) a particular condition has harmful consequences for other people (or for valued objects) and (b) he or she is responsible for those consequences, will be motivated by a personal norm to take action to prevent the expected harm (Stern, Dietz, & Guagnano, 1995). Norm-activation theory therefore offers a theoretical perspective to explain conditions for the act of obligation proposed by Dobson (2003) in his characterization of a Good (*Earth*) Citizen. Specifically, we propose that the Earth Citizen, in accepting an obligation to act in a fair and just manner (e.g., by consuming fewer environmental resources), is motivated by social responsibilities and awareness (e.g., to consider the welfare and concern of other distant people).

Representing the culmination of more than a decade's work in predicting pro-environmental behavior (see, for example, Guagnano, Stern, & Dietz, 1995; Stern, 2000; Stern & Dietz, 1994; Stern et al., 1995; Stern, Dietz, & Kalof, 1993; Stern, Dietz, Kalof, & Guagnano, 1995), Stern, Dietz, Abel, Guagnano, and Kalof (1999) have proposed three levels of environmental behavior that reflect citizen support for an environmental movement: (a) changes in personal consumption of environmental resources (e.g., reductions in energy use and purchases of environmentally friendly products), (b) support for public environmental policies (SPEP; especially that require material sacrifice to achieve environmental goals), and (c) active citizenship (activities such as engaging in civic environmental organizations and writing political officials). Collectively, the associated scales (see Table 1) broadly represent the dimensions of global citizenship proposed earlier: (a) a responsibility and concern for protecting the environment (environmental concern, EC), (b) an awareness of the individual's role in environmental issues (SPEP), and (c) engagement in environmental-oriented actions including ecologically sensitive personal consumption (ecologically conscious consumer behavior, ECCB).

Education Abroad and Global Citizenship

Lutterman-Aguilar and Gingerich (2002) argue that education abroad can effectively prepare students as responsible global citizens if programs incorporate the principles of experiential education, notably action-oriented experiences that encourage

Table 1. Scale Reliabilities and Item-Total Correlations (Alpha) for EC, SPEP, and ECCB by Time (Pretest and Posttest).

	Alpha/item-total correlations	
Scales and constituent items	Pretest	Posttest
EC scale	.87	.88
Read any newsletters, magazines, or other publications written by environmental groups.	.85	.87
Sign a petition in support of protecting the environment.	.85	.86
Give money to an environmental group.	.85	.87
Write a letter or call your member of Congress or another government official to support strong environmental protection.	.84	.87
Boycott or avoid buying products of a company because you feel that the company is harming the environment.	.85	.87
Vote for a candidate in an election at last in part because he or she was in favor or strong environmental protection.	.85	.86
Consider changing the car/vehicle you normally drive to a smaller engine size.	.86	.89
Become a member of any group whose main aim is to preserve or protect the environment.	.84	.86
SPEP scale	.88	.92
I would be willing to pay much higher taxes to protect the environment.	.80	.88
I would be willing to accept cuts in my standard of living to protect the environment.	.87	.90
I would be willing to pay much higher prices to protect the environment.	.81	.86
ECCB scale	.87	.91
To save energy, I will drive my car as little as possible.	.87	.91
To reduce our reliance on foreign oil, I will drive my car as little as possible.	.87	.91
I will use a recycling center or in some way recycle some of my household trash.	.87	.90
I will convince members of my family or friends not to buy some products that are harmful to the environment.	.85	.90
I will try to only buy products that can be recycled.	.85	.90
I will switch products for ecological reasons.	.85	.89
When I purchase products I will always make a conscious effort to buy those products that are low in pollutants.	.85	.90
I will not buy household products that harm the environment.	.86	.90
I will buy high-efficiency light bulbs to save energy.	.87	.91
I will purchase household appliances that use less electricity than other brands.	.87	.91

Note. EC = Environmental Citizenship; SPEP = Support for Public Environmental Policies; ECCB = Ecological Conscious Consumer Behavior.

reflection, critical analysis, and synthesis. Similar conclusions are drawn by McLaughlin and Johnson (2006), who propose a field-based experiential learning model for short-term study abroad programs. This model enables students to move beyond knowledge learning to application and integration, toward a real, "unbuffered" world. Indeed, there is strong evidence throughout the study abroad literature supporting the integration of experiential learning as a key medium for promoting higher order learning (e.g., Annette, 2002; Brandt & Manley, 2002; Montrose, 2002; Pagano & Roselle, 2009; Peppas, 2005; Peterson, 2002). What is lacking is demonstrable evidence of the *transformational change* attributable to participation in field-based/experiential study abroad programs, relative to (a) other study abroad programs lacking a structured experiential component and/or (b) home campus (i.e., traditional classroom) courses.

However, skepticism has been voiced about whether the increasingly popular short-term study abroad format can offer students a sufficiently profound experience to transform the fundamental values and beliefs that underlie global citizenship. Recent evidence suggests that the duration of the international experience may be only weakly related to student-learning outcomes. The large-scale Georgia Learning Outcomes of Students Studying Abroad Initiative (GLOSSARI; Sutton & Rubin, 2004) found a general advantage for study abroad at any duration over no study abroad in terms of graduation rates, although moderate duration (4-8 weeks) exceeded shorter and longer programs on this variable. In their study of more than 6,000 alumni from 20 institutions, Paige, Stallman, and Josić (2008, cited in Morais & Ogden, 2011) suggests no difference in global engagement between students who had studied abroad for shorter versus longer durations. Their findings from the University of Minnesota's Study Abroad for Global Engagement project revealed that students in short-term programs (of 4 weeks or less) were just as likely to be globally engaged as those who studied abroad for several months or longer (as reported by Fischer, 2009). Similarly, McKeown (2009) posited that, "students who had been abroad for as little as two weeks showed patterns of intellectual development more similar to peers who had been abroad for months or years than to those who had not been abroad at all" (p. 6).

The conclusion is that spending at least some time abroad is probably better than no time at all, though the extent to which the "*just do it*" analogy (Tarrant & Lyons, 2012) holds true for study abroad (i.e., relative to home campus) remains relatively unsubstantiated (Chieffo & Griffiths, 2004; McKeown, 2009). Longer duration programs may be associated with certain educational outcomes such as pursuit of a doctoral degree or the likelihood of international volunteerism following college, but not with others such as self-reported understanding of one's own culture or interest in learning about other cultures (Dwyer, 2004).

Purpose and Hypotheses

If we are to meet goals articulated by the Lincoln Commission and to respond to the *raison d'etre* of education abroad (Engle & Engle, 2003; Sutton, Miller, & Rubin, 2007), simply increasing the number of students abroad, or even just obtaining

satisfactory survey results without consideration of the academic focus and outcomes of the program, may be insufficient. Moreover, emphasizing quantity (the number of students abroad) over quality (the added value of studying abroad) will ultimately constrain (or at best fail to capitalize upon) the capacity of education abroad to foster a citizenry with a global/worldview. We propose that the highest levels of global citizenship will be associated with education abroad programs that (a) embed an experiential/field component and (b) focus on academic topics inextricably linked to citizenry, such as sustainability; that is, students completing an experiential/field-based sustainability course via study abroad will display significantly higher scores on measures of global citizenry than any other group of students measured.

More specifically, we hypothesize that course topic (sustainability vs. nonsustainability) will interact with location of class (study abroad vs. home campus) and with time of data collection (pretest vs. posttest) such that for all dependent measures (namely, EC, SPEP, and ECCB),

1. All course topic by location combinations will be equivalent at pretest (Hypothesis 1);
2. Average posttest scores will be significantly higher for students enrolled in sustainability courses than for students not enrolled in sustainability courses, independent of whether they studied abroad (Hypothesis 2);
3. Average posttest scores will be significantly higher for students enrolled in sustainability courses abroad than for students enrolled in sustainability courses not abroad (Hypothesis 3).

Method

Sampling

Undergraduate students in selected summer 2011 courses offered by a large (approximately 35,000 student body) southeastern U.S. university were sampled. Respondents had self-selected and registered for Maymester (May-June) or summer (May-July) 2011 courses. Students were enrolled either in classes with an explicit focus on sustainability, or else in classes that had no sustainability component in their curricula. Thus, students were nested in one of four groups: (a) study abroad/sustainability, (b) study abroad/nonsustainability, (c) home campus/sustainability, or (d) home campus/nonsustainability. The study abroad/sustainability group consisted of students in a 4-week education abroad Maymester program to Australia on the topic of Sustaining Human Societies and the Natural Environment. The study abroad/nonsustainability group included three education abroad programs in Cortona, Italy (focusing on arts education), Oxford, England (English literature), and Paris, France (history and culture) offered during the Maymester. The home campus/sustainability group comprised four courses (Introduction to Biological Anthropology; Ecology and Evolution of Human Disease; The Ecological Basis of Environmental Issues; and Biology of the Marine Environment), the first two of which were offered during Maymester (a 4-week

term period) and the latter two in the summer semester (an 8-week term). The home campus/nonsustainability was four courses (Introduction to Computers for Teachers; Exploring Learning and Teaching; Introduction to Hispanic Linguistics; and Introduction to Public Speaking) all offered during the Maymester.

A total of 357 students registered for one of the four groups of courses; of these, 80.1% (n = 286 students) successfully completed the pretest and posttest and 19.9% (n = 71) were dropped. Of the 286, 35.3% (n = 101) were in the study abroad/sustainability course (n = 19 students dropped), 24.5% (n = 70) in study abroad/nonsustainability (n = 13 students dropped), 24.1% (n = 69) in home campus/sustainability (n = 24 students dropped), and 16.1% (n = 46) in home campus/nonsustainability courses (n = 15 students dropped). Students were dropped because they either failed to complete the pretest or posttest survey (n = 60) or their responses were invalid (e.g., consistent patterns of responses or no responses, n = 11).

The study abroad/sustainability program included a strong experiential education component: Students spent about 75% of their time in the field and 25% in traditional classroom lectures and seminars. The study abroad/nonsustainability courses were primarily classroom-based (though students could travel in their nonstructured free-time); the home campus/sustainability group was almost exclusively classroom-based, but one course—marine biology—included some limited local fieldwork. The home campus/nonsustainability group was entirely classroom structured.

Instruments and Procedures

A survey was administered on Day 1 (pretest) and the final day (posttest) of each respective course. Student participation was voluntary and no course credit was awarded for completing the instrument (an alternative reading assignment was available for students not wishing to complete the survey). Surveys were anonymous, but a numbering system permitted matching pretests and posttests.

Global (environmental) citizenship was measured using scales adopted from three instruments: (a) The eight-item Environmental Citizenship (EC) scale (Stern et al., 1999) was selected as one of the most comprehensive scales to measure citizen engagement with the environmental movement (e.g., writing letters to senators, voting, group membership, and so on); (b) The three-item SPEP scale (Stern et al., 1999) was selected because it represents notions of obligations (a willingness to act) and civic responsibility (i.e., toward paying higher taxes, reducing standards of living, and protecting the environment) inherent in contemporary thinking about global citizenship; (c) Finally, 10 items representing 4 factors were selected from the 29-item, 6-factor, ECCB scale (Roberts & Bacon, 1997). Two ECCB items were selected from the oil/driving factor, three items reflected general recycling behavior, three items concerned general environmental consumption, and two items were selected from the electricity-saving factor. The ECCB was selected because it represents the consumption dimension of citizen engagement; that is, citizens as consumers (e.g., purchasing high-efficient light bulbs, recyclable products, and efficient appliances).

Items comprising each of the three scales and scale internal consistency reliabilities (Cronbach's alpha) appear in Table 1. Reliabilities found in the present study were

Table 2. Mean Values for EC, SPEP, and ECCB by Group (Study Abroad and Sustainability, Study Abroad and Nonsustainability, Home Campus and Sustainability, and Home Campus and Nonsustainability) and Time (Pretest and Posttest).

	Study abroad		Study abroad		Home campus		Home campus	
	Sustainability		Nonsustainability		Sustainability		Nonsustainability	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
EC (pretest)	28.48	7.88	28.57	12.39	28.87	11.38	26.17	9.24
EC (posttest)	35.28	8.43	29.00	11.73	32.24	12.03	27.31	9.11
SPEP (pretest)	11.05	3.93	12.04	4.79	11.90	4.34	10.34	4.00
SPEP (posttest)	13.49	3.86	11.00	4.46	12.94	4.77	10.65	4.61
ECCB (pretest)	46.38	9.52	47.12	10.98	47.54	12.60	44.93	10.53
ECCB (posttest)	54.02	9.15	46.08	11.91	49.94	13.56	43.00	12.75

Note. EC = environmental citizenship; SPEP = support for public environmental policies; ECCB = ecologically conscious consumer behavior.

slightly higher than those reported in the previous literature (see Stern et al., 1999 for SPEP and EC and Roberts & Bacon, 1997 for ECCB). Roberts and Bacon's ECCB Scale was selected over Stern et al.'s (1999) environmental consumption measure because it demonstrated higher internal consistency in previous studies. Higher scores on all three scales indicate greater levels of global (environmental) citizenry. The pretest and posttest for the SPEP was a 7-point response scale from 7 (*strongly agree*) to 1 (*strongly disagree*) with a midpoint of 4 (*neither agree or disagree*), while the EC and ECCB scales used a 7-point response scale from 7 (*extremely likely*) to 1 (*not at all likely*).

Analysis

Data were analyzed using SAS 9.3 (SAS Institute Inc., 2012). The two between-subjects factors were (a) sustainability (vs. nonsustainability) courses and (b) study abroad (vs. home campus) courses; the within-subjects factor was time (pretest vs. posttest). Separate three-way repeated-measures ANOVAs for each of the three dependent variables, with follow-up effect tests (post hoc comparisons), were used to examine the hypotheses. A significance level of $p = .05$ was used throughout.

Results

Item-total correlations (alpha) for the three dependent variables (EC, SPEP, and ECCB) by pre- and posttest are shown in Table 1. Alphas were .80 or higher, indicating adequate levels of internal consistency for all three dependent measures.

Tests of Hypotheses

Table 2 shows time of testing by class topic by class location mean scores for each of the three dependent variables (EC, SPEP, and ECCB; see also Figures 1-3). For all

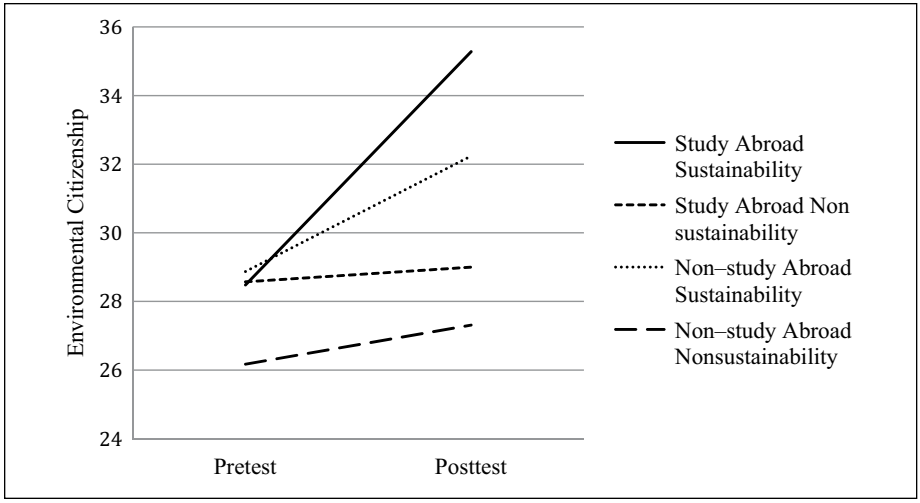

Figure 1. Mean values for Environmental Citizenship (EC) by group (study abroad and sustainability, study abroad and nonsustainability, non–study abroad and sustainability, and non–study abroad and nonsustainability) and time (pretest and posttest).

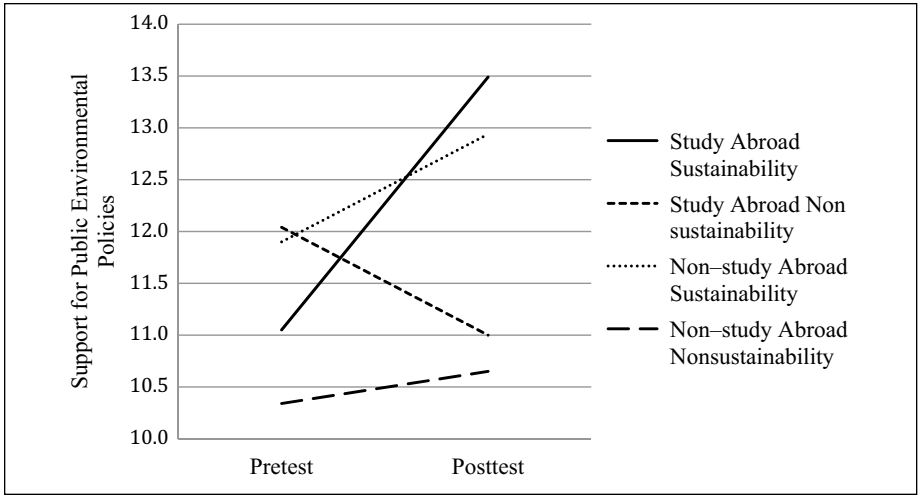

Figure 2. Mean values for Support for Public Environmental Policies (SPEP) by group (study abroad and sustainability, study abroad and nonsustainability, non–study abroad and sustainability, and non–study abroad and nonsustainability) and time (pretest and posttest).

three dependent variables, the highest order (study abroad by sustainability by time) interaction was significant (Table 3): For EC, $F(1, 271) = 5.02$, $p = .026$; for SPEP, $F(1, 278) = 11.64$, $p \leq .001$; and for EECB, $F(1, 269) = 5.09$, $p = .025$.

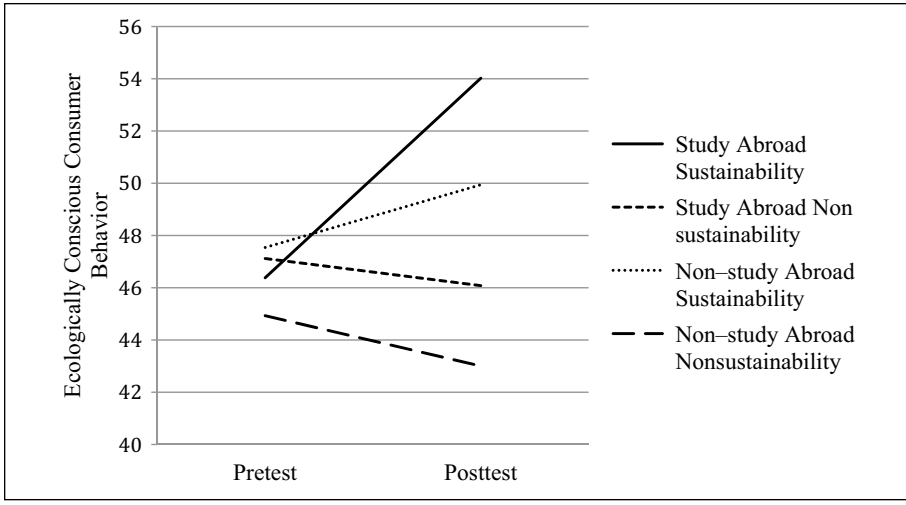

Figure 3. Mean Values for Ecologically Conscious Consumer Behavior (ECCB) by group (study abroad and sustainability, study abroad and nonsustainability, non–study abroad and sustainability, and non–study abroad and nonsustainability) and time (pretest and posttest).

Follow-up effect tests (i.e., post hoc comparisons of cell means for simple effects) reveal that (a) for all three dependent measures, average pretest scores were not significantly different across any of the topic by location groups (supporting Hypothesis 1) and (b) average posttest scores were significantly higher for students enrolled in sustainability courses than for students not enrolled in sustainability courses, both for students who studied abroad, for EC, $F(1, 271) = 15.80$, $p < .001$; for SPEP, $F(1, 271) = 12.61$, $p < .001$; for ECCB, $F(1, 271) = 20.16$, $p < .001$, and for students who did not study abroad, for EC, $F(1, 271) = 6.43$, $p = .011$; for SPEP, $F(1, 271) = 7.76$, $p = .001$; for ECCB, $F(1, 271) = 9.56$, $p = .002$, supporting Hypothesis 2; (c) For two of the three dependent measures, average posttest scores were significantly higher for students enrolled in sustainability courses abroad than for students enrolled in sustainability courses at their home campuses, for EC, $F(1, 271) = 3.88$, $p = .049$; for ECCB, $F(1, 271) = 6.18$, $p = .001$, partially supporting Hypothesis 3. For the dependent variable SPEP, average posttest scores were not significantly different for students enrolled in sustainability courses abroad than for students enrolled in sustainability courses on their home campuses.[1]

In summary, relative to other treatment combinations, students who studied abroad and also enrolled in a sustainability course exhibited the highest overall scores on two of three dependent measures at posttest. For the third measure, SPEP, there was no significant difference between students studying about sustainability abroad versus students studying about sustainability on their home campuses, although scores for both groups exceeded students studying other topics. While students studying about sustainability in a home campus course also demonstrated positive changes across time, the increments from pretest to posttest were not as dramatic as for students

Table 3. Repeated MANOVAs for EC, SPEP, and ECCB by Location (Study Abroad vs. Home Campus), Class Topic (Sustainability vs. Nonsustainability), and Time (Pretest and Posttest).

	F	*p*	*df*	Error *df*
EC				
Location	2.20	.134	1	281
Class topic	8.79	.003	1	281
Time of testing	41.76	<.001	1	271
Location by topic	0.09	.768	1	281
Location by time	2.58	.109	1	271
Topic by time	22.17	<.001	1	271
Location by topic by time	5.02	.026	1	271
SPEP				
Location	0.86	.355	1	282
Class topic	7.02	.009	1	282
Time of testing	13.45	<.001	1	278
Location by topic	1.53	.218	1	282
Location by time	0.03	.854	1	278
Topic by time	28.40	<.001	1	278
Location by topic by time	11.68	<.001	1	278
ECCB				
Location	2.76	.010	1	280
Class topic	10.34	.002	1	280
Time of testing	11.13	.001	1	269
Location by topic	0.14	.709	1	280
Location by time	9.80	.002	1	269
Topic by time	38.26	<.001	1	269
Location by topic by time	5.09	.025	1	269

Note. EC = environmental citizenship; SPEP = support for public environmental policies; ECCB = ecologically conscious consumer behavior.

studying those topics abroad. Students who studied nonsustainability courses—whether abroad or on their home campus—displayed no significant changes from pretest to posttest.

Discussion and Conclusion

The present study tested the hypotheses that course location (study abroad vs. home campus) interacts with course subject matter (sustainability versus nonsustainability) such that the greatest impact on students' global citizenship would be engendered by studying abroad about sustainability. We measured global citizenship along three dimensions: (a) political advocacy for environmental causes (EC), (b) sense of obligation and civic involvement (SPEP), and (c) consumption of resource-intensive goods

(ECCB) and recorded very similar findings across all three measures (with only one exception for the post hoc comparison of the study abroad/sustainability and home campus/sustainability groups for SPEP).

Findings of a significant highest order (three-way) interaction, for all three dependent variables, suggest that study abroad, in itself, is not the most powerful engine for nurturing a global citizenry. Rather, it is the combination of location (abroad) and academic focus (sustainability via experiential/field learning) that appears to yield the greatest increases in global citizenship scores (across multiple dimensions of global citizenship). This point is worth highlighting for programs that seek to promote other goals such as cultural sensitivity or proficiency in cross-cultural communication that are commonly associated with international education. No doubt substantial gains on these objectives can be achieved through well-designed on-campus instruction (Geelhoed, Abe, & Talbot, 2003). Conversely, it would be erroneous to presume that students always gain in intercultural competence simply by studying outside their nation's borders (Cushner & Karim, 2004). Rather, international education objectives are likely optimized when students receive deliberate instruction in those objectives in the context of field-based, experiential study abroad.

It is notable that significant increments in global citizenship were brought about after only 4 weeks of instruction. Some authorities have questioned whether short-term study abroad is a sufficiently potent force to bring about transformative learning; however, the present study joins those that do support the efficacy of short-term international education (e.g., Chieffo & Griffiths, 2004; Donnelly-Smith, 2009; McKeown, 2009; Tarrant & Lyons, 2012; Wynveen, Kyle, & Tarrant, 2012). However, the present study did not collect information regarding the long-term persistence of these increases in global citizenship. With only rare exceptions (e.g., Stewart, 2010), the field of study abroad research suffers from lack of delayed posttesting.

What factors might account for the especially powerful synchrony between studying abroad and studying about sustainability? First, especially for students with little or no international experience, the simple fact of being abroad can be sufficiently disequilibrating to open students to profound learning (McKeown, 2009). In contrast, a student studying very similar subject matter on campus might simply treat the class like any other routine learning assignment. An interesting question—beyond the scope of the present study—is whether the international locus is critical for such openness to transformational learning. It is possible, for example, that similar learning outcomes could be achieved by learning experiences that are similarly disequilibrating, yet located domestically, such as a domestic but off-campus field-based class (Morgan & Cox, 2006) or an on-campus immersion experience (Freed, Segalowitz, & Dewey, 2004).

Limitations

An inherent bias of quasi- (field) experimental design is lack of random assignment of participants to levels of the independent variable (Campbell & Stanley, 1963). In the present study, students self-selected courses during the summer semester 2011 and

true randomization of students was not possible. However, there was no significant difference among the four treatment groups' pretest scores for any of the three dependent measures (EC, SPEP, and ECCB), suggesting some group equivalence on Day 1 of the respective course. Selection biases also account for a student's decision to study abroad rather than to remain on campus, for the duration of their study abroad program, as well as for the region and the subject matter they select for their study abroad experience (Salisbury et al., 2009). Overcoming sample biases in study abroad research continues to be a major impediment to establishing causal relations between studying abroad and learning outcomes (Sutton et al., 2007). To a degree, we have attempted to minimize the effect of selection bias by selecting Maymester/summer students across all groups. At least all of the students in each of the treatment groups had decided in common to take an intensive summer class.

A related issue is the focus on extensive field studies in the study abroad/sustainability courses, which may have been the agent of (or contributor to) change. However, because all but the non–study abroad/nonsustainability courses included some form of experiential education (varying in type and length), it requires further study to explicitly control for the effect of this pedagogical approach.

Naturally, our findings are in part artifacts of the measurement instruments we used. Following others (e.g., Attfield, 2002; Bryant, 2006; Dobson, 2003; Winn, 2006) we considered global citizenship to be inextricably tied to global environmental obligations, expressed as responsibilities, actions, and attitudes toward reducing one's ecological footprint. While other scales of global citizenship have been developed (e.g., Morais & Ogden, 2011; Winn, 2006), these scales lack stringent tests of validity and reliability that limit their usefulness. Other commonly used international education learning outcomes scales, such as the Global Perspective Inventory (Braskamp, 2008) were not developed directly to assess global citizenry and consequently lack the breadth of dimensional components discussed previously.

The effect of the faculty in each of the groups is a confounding variable that could not be directly controlled. The study abroad/sustainability group, for example, comprised four different subgroups, each with a different lead faculty; similarly, each different course within the remaining three groups had a unique faculty that could potentially influence the outcomes, regardless of the academic focus of the course. In addition, students in the study abroad/sustainability group received 6 credits of coursework in sustainability, unlike students in the home campus/sustainability group who may not have received such a large dose of sustainability (though it is unknown what other courses they may have enrolled in during the study term). Also, students completing summer semester courses (as part of the home campus/sustainability group) received exposure to sustainability concepts over a longer period of time.

The focus of the study is obviously U.S. students abroad, and it is unknown how non-U.S. students abroad might have responded to similar programs. Moreover, the lack of any qualitative evidence that can be tied to these findings (and reliance on wholly a self-assessment questionnaire) raises a concern that respondents (U.S. or otherwise) may have given politically desirable answers to avoid cognitive dissonance (Festinger, 1957); that is, given the money and time invested in study abroad, students

may be motivated to reduce dissonance by avoiding any negative thoughts associated with the experience (see also Wexler, 2006).

Accordingly, our literature review reflects the U.S. short-term study abroad market and research. Relatively very few empirical studies have explored non-U.S. students abroad (see Curthoys, 2000), primarily because study abroad is only an emerging pedagogy for non-U.S. universities and colleges. While international education has been a key export industry for Australia, New Zealand, and the United Kingdom especially (i.e., where there has been a focus on increasing the number of inbound students), the number of outbound students from these three countries, particularly in short-term study abroad (as opposed to student exchange) has been very limited (In contrast, the United States has had relatively strong import and export study abroad markets.). One notable exception has been the work in volunteer tourism, a broadly related area to study abroad, in which Australian studies in particular have demonstrated the beneficial effects of international volunteering on global engagement, intercultural development, and learning outcomes (see, for example, Palacios, 2010).

Finally, the study focuses explicitly on environmental awareness and behaviors and does not address other dimensions of global citizenship. While the rationale for this focus was outlined in the introduction of this paper (i.e., the environment and sustainability are central tenets of global citizenship), other dimensions (such as social justice and civic engagement) should be equally pursued in future studies. Nevertheless, as our planet begins to face the realities of an anthropocentric-dominated society, key environmental issues such as climate change, the supply and distribution of renewable and nonrenewable resources, and biodiversity and species loss, will continue to be among the most pressing of all global problems.

Conclusion

Our findings have implications for political agendas and academic initiatives, as well as for recent research suggesting a *Just do it* approach to study abroad (McKeown, 2009; Tarrant & Lyons, 2012). Clearly, education abroad has value to higher education through enabling a multitude of learning outcomes (Sutton et al., 2007; Sutton & Rubin, 2004), but the extent to which this education approach adds value beyond that which could be provided through on-campus courses remains relatively unknown. We have demonstrated that study abroad alone is not optimal for nurturing a global citizenry but it has the potential to do so when the academic content and pedagogical delivery is offered in a synergistic fashion (see also Lutterman-Aguilar & Gingerich, 2002).

As resources become available for study abroad development, funds should be targeted toward programs that promote demonstrable and specific learning outcomes. We argue that short-term, faculty-led, field-based programs can have an important role in fostering some of the outcomes considered critical to national security, globalization and global competitiveness, and social norms (Lewin, 2009; Stearns, 2009). Although not all education programs should be similarly structured, we concur with Lutterman-Aguilar and Gingerich (2002) that, “study abroad and experiential

education are natural partners because they share the common goal of empowering students and preparing them to become responsible global citizens" (p. 46) and with Braskamp et al. (2009) who propose that neither "formal didactic classroom instruction [nor] experiences such as travel and social encounters alone may be insufficient in guiding students to think with more complexity and to view themselves as global citizens with a sense of responsibility" (p. 113).

Accordingly, we encourage faculty to incorporate field-based learning in study abroad curricula and to consider their role as facilitators of citizen activism (Hanson, 2010), promoting opportunities for civic engagement, responsibility, and global awareness. The challenge, of course, is to develop programs in a measured and effective way. Such programs must be attractive to students (especially for those traveling abroad for the first time), yet must not turn the travel experience into a token service program of consumerism with little value beyond the tourism dollars it generates (Susnowitz, 2006; Zemach-Bersin, 2009). Because short-term programs are likely to remain the only realistic option for many undergraduate students and potentially the least expensive medium for democratizing study abroad, achieving such strategies will be critical. Moreover, if deferred U.S. legislation (The Senator Paul Simon Study Abroad Foundation Act) is ever passed and funded, resulting in a proposed fourfold increase to one million students annually, it will be imperative that we understand the quality of outcomes produced and modify the breadth and diversity of programs accordingly.

For colleges and universities to expand the diversity and number of their students overseas, study abroad advisers should recognize (and transmit to their student populations) the value added by different programs. A one-size-fits-all approach cannot be justified in study abroad and, rather than encouraging students to simply go abroad, advisers should attend to the needs of students beyond their desired country of destination and academic goals, to include professional development (including higher order outcomes such as global citizenry). In the present case, for example, short-term study abroad programs emphasizing sustainability and delivered via experiential education promoted global citizenship scores beyond that obtained either through (a) an on-campus sustainability-related course or (b) a study abroad program that did not address sustainability nor delivered experientially. Incorporating such personal transformational changes into the core objectives of study abroad courses may encourage faculty (and institutions) to acknowledge the added value of study abroad beyond the classroom. It is only in the study abroad environment, for example, that the most dramatic advances in promoting global citizenry are likely to be achieved.

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Note

1. One reviewer requested we explore the effect of previous study abroad experience. Almost one in five (19.6%, $n = 56$) had previously studied abroad, but with only one exception (Ecologically Conscious Consumer Behavior [ECCB]), previous study abroad had no significant effect on the dependent measures. In the case of ECCB, previous study abroad experience exerted very small and negative covariate effects ($r = -.05$ and $-.10$) for the pretest and posttest, respectively.

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