Community-based Ecotourism Design Studio in the Yucatan Peninsula: Enhancing Study Abroad with a Service-learning Component

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Abstract

The benefits of study abroad programs in U.S. higher education are well documented. Lewis and Niesenbaum (2005) concluded that incorporating a service-learning component can greatly enhance a short-term study abroad program for the participant.

The purpose of the paper is to document the preliminary results from an on-going study to determine the benefits of incorporating a service-learning component into a study abroad program. A qualitative, rather than quantitative approach was used in the evaluation process. The research involves a course in community-based ecotourism for landscape architecture students from Texas Tech University. It includes three weeks of travel and service-learning projects for rural Mayan villages. Students kept journals as their service-learning reflection activity that were analyzed utilizing the qualitative techniques described by Boyd, et al (2006) to determine themes of students’ interest or concern. The writing was further analyzed within The Taxonomy of the Affective Domain (Krathwohl, 1964) to document the level at which the students were reflecting on their experience.

The results indicate an increased level of affective learning by most students, which correlate closely with those of Lewis and Niesenbaum (2005) who found that linking community-based experiences with a study abroad curriculum enhances learning. Lewis and Niesenbaum also reference studies that indicate reasons why many students do not study abroad, including financial constraints and academic requirements. These concerns are echoed by the authors’ interviews and discussions with students and colleagues. Therefore, students can receive similar benefits from a short-term setting who are unable to participate in long-term programs.

Keywords: Community-Based Ecotourism, Service Learning, Study Abroad, Mexico, Landscape Architecture
Introduction

The benefits of a study abroad program in higher education are well documented. These include experiencing personal growth, developing valuable career skills and “Becoming a ‘Global Citizen’ in Today’s interconnected world” (Northwestern University’s Study Abroad Office). A long term study by Dwyer and Peters (2004) of study abroad participants from the last 50 years provides indications of extremely positive, personal, educational and career growth among the participants. The study, sponsored by the Institute for the International Education of Students, surveyed participants who studied abroad between 1950 and 1999. Programs included full-year, fall semester, spring semester and summer programs. Results indicate that 97% of the participants experienced personal growth to the extent that one individual stated she learned more about herself in one semester abroad than she did in over three years of college. Over 90% of the participants reported greater cultural awareness, not only of other cultures, but of their own. Dwyer and Peters (2004) also reported that the often profound experiences were also reported to be long-term and non-fleeting. Academic and career matters were also influenced by the study abroad experience. Educational decisions were influenced in approximately 70% of the cases, while career choices were influenced in 75% of the participants.

Dwyer and Peters (2004) also found that longer study abroad experiences generate greater benefits, yet the trend is for shorter programs, as indicated by the fact that in the 1990s only 20 percent participated in a full year abroad as opposed to 70 percent in the 1950s and 1960s. Furthermore, three times as many participants studied for less than ten weeks in the 1990s than in the 1950s and 1960s. Given the trend toward shorter term study abroad programs, one can conclude that strategies that enhance such programs need to be developed in order to approach the effectiveness of long-term programs.

The benefits of a study abroad program can be greatly enhanced by including a service-learning component. Lewis and Niesenbaum (2005) concluded that by incorporating this pedagogy, a short-term study abroad program can approximate long-term study abroad outcomes. They also found that short-term programs that included a community service-learning aspect were more appealing and more accessible to students who would not otherwise choose, or be able to participate in an international program due to road blocks such as financial constraints, curriculum conflicts, or post 9/11 fears about foreign travel.

According to Kendall (1990) a community service-learning program can be especially beneficial in developing important civic and social responsibilities for U.S. students. According to Sharkey (1994) the profession of landscape architecture should commit itself to several societal imperatives, including “improving the condition of the community and society,” as well as “protecting cultural and historic values of a region or a nation.” The American Society of Landscape Architects (ASLA) includes in its definition of the profession a reference to the necessity for landscape architects to apply cultural knowledge as an aspect of the design process (ASLA Constitution, 1975). Additionally, Hamed (1991) notes that foreign countries, many of them underdeveloped countries, are seeking assistance from professional design and planning firms for their urban and industrial development projects. He suggests that U.S. landscape architecture programs are not preparing students to adapt design decisions to foreign cultures and should take a stronger role in promoting the education of students for international practice.

We propose that a study abroad program for landscape architecture students can provide the opportunity to emphasize the cultural aspects of design in a setting
very different from the traditional classroom or studio setting. Additionally, service-learning’s emphasis on civic responsibility should help provide the opportunity to develop students’ knowledge and sense of civic responsibility. And finally, combining service-learning with study abroad should be able to greatly enhance the educational value of both forms of learning.

**Purpose and Objectives**

The purpose of this study was to determine the benefits of incorporating a service-learning component into a study abroad program for U.S. landscape architecture students. Additionally, the study investigated the effectiveness of service-learning reflection activities in the study abroad setting. A qualitative, rather than quantitative approach, to the evaluation of an on-going program was used to determine the benefits to U.S. landscape architecture students. Opportunities for program improvements were investigated and evaluated in light of the information gathered.

**Theoretical Framework**

Service-learning is a form of experiential learning (McAleavey, 2006). Learning activities that make a direct connection with the subject of the curriculum are considered to be experiential learning. Dewey (1938) made the assertion that one learns well or better when doing. Kolb (1984, p. 41) defined experiential learning as “the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience.” Service-learning takes the concept of experiential learning further. Whereas the focus of experiential learning is the learner, the focus of service-learning is twofold. According to Kendall (1990, p. 40), “Service-learning programs emphasize the accomplishment of tasks which meet human needs, in combination with conscious educational growth.” According to Kendall, an effective service-learning program involves a diverse group of committed participants engaged in a community service activity that has clear goals for both service and learning outcomes. It includes opportunities for critical reflection as an important learning activity and a full range of preparation, project management and assessment techniques.

In keeping with Kendall’s principles, the service-learning aspect for this project utilized the community-based ecotourism concept, which is a subset of traditional ecotourism. It emphasizes the development of cultural tourism activities that benefit the local indigenous citizenry to a far greater extent than any other form of tourism. It provides the unique opportunity for U.S. landscape architecture students to become involved in both community design and cultural design in a service-learning setting.

**Methods**

In order to better evaluate a phenomenon in its natural setting, qualitative and case study research have become common in the field of education. Intentions of case study research are not to explain phenomenon, but to, the situation and generate meaning from its context (Gall, Borg, Gall, 1996).

This study, conducted by an interdisciplinary group of professors of landscape architecture and agricultural education and communication, involves the evaluation of an on-going study abroad program conducted by the Department of Landscape Architecture at Texas Tech University. To date, three summer classes have traveled to Mexico’s Yucatan Peninsula where students became immersed in the culture, history, and environmental uniqueness of the area. They visited and evaluated a variety of ecotourism venues, including community-based programs in two Mayan villages. They conducted several design studios in those villages and produced schematic design documents that the citizens have used for a variety of
purposes, including grant applications for infrastructure funds.

The programs began prior to departure with meetings and discussions on the logistics of traveling in a foreign country: required documentation, what to pack, what to expect, budget, and other important details. The National Geographic video “Dawn of the Maya” served as an introduction to Mayan history and its mysteries. Finally, readings provided additional historical information and the initial academic assignment for basic background knowledge of ecotourism and community-based ecotourism.

The in-country schedule was arranged along the lines of the traditional landscape architectural design process. It started with a contextual analysis and case studies in the form of visits to historical, cultural, and environmental venues. The sites were chosen, in advance, by the professor leading the program based on previous visits to the area. This helped the students to more completely understand the uniqueness of the Yucatan Peninsula. Some of the sites visited included ecotourism venues of various descriptions from large corporate operations, to individual and Non-Government Organization (NGO) facilities and community-based programs. More extensive background research was included in the form of the additional readings which covered sustainability issues and case studies of ecotourism and community-based ecotourism projects. The readings were reinforced through discussions with the professors and special guest lecturers. These included prominent conservationists, anthropologists, and archeologists. For example, Dr. Alan Myers professor of archeology, Eckerd College, provided a presentation on the history and findings at Hacienda Tabi that includes a discourse on how the built environment was developed in order to reinforce superiority over the workers in a debt/peonage social structure.

Following several weeks of travel, meetings and discussions, students traveled to indigenous Mayan villages to conduct their design studios. These villages are interested in or have the opportunity to develop community-based ecotourism programs. To date the program has worked with three villages: Yaxunah, Yaxhachen, and Xcobenhaltun. All are in the Mexican state of Yucatan.

In all of the design studios, students met with the local citizens, committee members and civic leaders. They interviewed them and worked to understand their needs, aspirations and requirements before proceeding with the design process. This is a particularly important part of the program from the standpoint of civic engagement and communication. Therefore it was important for students to understand and participate in the civic design process. In some cases the community design aspects were more prominent than the tourism aspects of the design problem. Additionally, students worked hard to communicate with individuals who speak a foreign language. In Yucatecan villages, the first language is Mayan; the second language is Spanish, and if they speak any English, it would include only a few words or phrases. Therefore, students relied on translators, in which case they needed to use only basic English rather than the jargon of landscape architects often found in traditional studio settings.

Additionally, since landscape architecture’s focus is visual, students were encouraged to use graphics to communicate information during the trip to the Yucatan. They all carried sketchbooks that were readily available for drawing a quick idea or potential design solution.

The sketchbook provided for another very important function. Students were required to keep a journal as part of the service-learning reflection activities. They were told in advance that it was a course requirement which would be collected, copied and read for further study and analysis. The students were also encouraged to express their genuine feelings, not what they think the professor wants to read.
Specific instructions in the form of prompts and questions were provided for daily reflective writing activities. Three additional prompts, which are the focus of this study, were provided for a pre-reflection essay, an intermediate essay, and a post-reflection essay. These writing activities were first used during the 2005 summer program when the service-learning coordinator for Texas Tech University participated in the program and helped develop and investigate the effectiveness of various forms of reflection activities. The students seemed most receptive to the idea of journaling out of all the service-learning reflective activities investigated.

Denzin and Lincoln (1995) explained that in order to be a bricoleur researcher various methods must be used that develop an intertwined set of methodological practices allowing for a better perception of the subject matter at hand. Due to the need of various methods in interpretive research, triangulation was established in order to analyze the data more effectively. Each student individually wrote in a journal (Denzin & Lincoln, 1995).

Gall, Borg, and Gall (1996) state that archived text, or journals, offer accurate perspectives of participants at a specific time, eliminating any change of perspective due to post-phenomenon experiences. The journals of the students were accessed and analyzed for themes related to the established objectives.

In qualitative studies, data analysis refers to the categorizing and ordering of information in such a way as to make sense and to report findings that are factual and correct (Brink, 1991). However, one limitation is that sampling techniques used in qualitative studies do not allow application of findings outside of the participants.

According to Benner (1985), data can be analyzed on a thematic basis using an open, axial, and selective coding system. Open coding involves a system by which the data is studied, compared, and conceptualized. After open coding, data can be put together by category. This is called axial coding. After the data is axially coded, it can be put into core categories, or selectively coded, to develop themes that relate to the research at hand (Strauss & Corbin, 1990). This study used such coding, resulting in the development of themes. Once the data was openly coded, axially coded, and selectively coded, emergent themes were documented and listed in order of pervasiveness.

Control measures are necessary to assure the truthfulness of the results presented. The usual measures of validity and reliability generally accepted in quantitative research are not appropriate for use in phenomenological studies. Nevertheless, steps to minimize errors of interpretation and to control interpretive bias remain important. Qualitative research methods have controls of reliability and validity built into the study design. In this research, journal entries were read and analyzed by multiple researchers and participant observation was utilized (Patton, 2002).

Triangulation was used in the design of this study. Emergent themes from the individual student journals were compared. In addition, each the three authors of this paper coded all journals to ensure data accuracy. This eliminated weak themes from being used as emergent themes in the findings.

There were 17 journals evaluated and the student authors were kept anonymous, using single letters unrelated to their name to provide an audit trail if needed. These are identified in the following text using the symbol “(X)” to identify the individual author. The journals were from the 2005 and 2006 program and all but one student journal was evaluated. The one journal was eliminated as the student did not follow the same instructions and completed all writing after completing the trip. For the purposes of the first phase of this research, only pre- and post-reflection essays program...
were coded. The prompts for these essays were identical in both instances and therefore provided more consistent reflection responses. They were developed by the Morgan Mercer, the service-learning coordinator for Texas Tech University. The prompts were as follows:

Service-Learning Pre-Reflection Essay Questions:

- What elements make up an effective community-based eco-tourism venue?
- What is the value of collaborating with cultural communities in the design process?
- What is the landscape architect’s role in conservation?
- How does a landscape architect contribute to the world around him or her?
- What am I excited and/or worried about regarding the community projects?
- Overall, what do I hope to gain from this experience?

Service-Learning Post Reflection Essay Questions:

- How did partnering with cultural communities enhance the design process? Use specific examples from your experiences in Yaxunah and Yaxhachen as well as any partnership values you felt were particularly important.
- Based on your experiences over the past few weeks, has your opinion of how a landscape architect professionally contributes to the world around him/her changed? Do you consider professional contributions a service? Explain why or why not.
- Refer to your fears and excitement about working with the community you wrote in the pre-reflection essay. How did your community experiences confirm or deny your initial anticipations?
- Overall, what do you feel you have gained from this experience? List three things.

The initial, open coding evaluation was completed independently by three separate professors. After the initial coding, the professors met to determine the dominant themes within the students’ writing. The initial, general coding was distilled into five overall themes. Since the writing was prompted by specific questions, there was a tendency to develop the themes in direct relationship with the prompt. It was determined, however, that the themes should be those that crossed over several prompts or were found throughout the writing, regardless of the prompt. For example, the role of the landscape architectural profession may show up in pre- and post-reflection essays and as a result of several different prompts.

Once the group reached consensus on the themes, the journals were reviewed again. The most prevalent themes were then analyzed using the five levels of the affective domain to determine any differences in the students’ levels of reflection.

Results

The three reviewers determined that the five dominant themes found in the students’ writing, in order of most to least dominant, were (1) the interaction between design and people, (2) the role of the landscape architectural profession, (3) interaction between design and culture, (4) personal growth, and (5) communication issues.

Communication (5) included both verbal and non-verbal issues and discussion on overcoming the language barrier. One student wrote, “My fear of the communication gap was evident, but graphics came in handy. So much so I was surprised.” (R) Another noted that the program improved his/her skills when working with a group, and a third, who
spoke Spanish, reflected on how translating improved his/her language skills (H).

**Personal growth** (4) for many students included writings in both the pre- and post-reflection essays. For example one individual wrote,

I have been looking forward to this trip because it has given me the chance to get away from the craziness of my family & school; to leave me alone with my thoughts about what I really want out of my life & schooling. As a landscape architect, I hope to learn more, especially from the other students. (Q)

Personal growth was also a theme in the post-reflection essays as many students noted that the trip had improved their self-confidence, such as the student who wrote, “My fear of not knowing what I was doing soon proved unfounded and with a little bit of help, I was able to truly contribute.” (D)

Personal growth also involved the numerous statements of gratitude for what they have and often take for granted as Americans.

**The interaction between design and culture** (3) provided for some very interesting insights, especially when considering that culture can include social, historical and environmental issues. A typical observation was as follows

When I first came, I thought these people can barely afford to feed themselves, how can they afford a nicely landscaped house or plaza? By the end, I saw that they cared much more for other things, like the social interaction they got in a plaza, than the plaza itself and that also amazed and inspired me. (L)

Another cultural observation with regard to design was, “Using culture as a main design element would reflect the values of the community and make it theirs.” (N) From an environmental standpoint there was a general consensus that landscape architects should be the leaders in conservation of natural resources and environmentally sensitive areas.

**The role of the landscape architectural profession** (2) included many statements concerning the changed or confirmed views of the profession. These included, in many cases, a broadened view of the professionals’ role in society. Some examples were:

I feel that landscape architects have a lot more to offer than what I originally thought. The service that we can provide a community or client is endless. I have found new areas of landscape architecture that I might want to pursue. (K)

Over the past few weeks I have learned that landscape architects can play a bigger role than I ever imagined. The decisions we make affect everything around us. (A)

These past few weeks [have] helped me realize that when I get my diploma I will be contributing to the world in all sorts of different ways. (H)

(It is interesting to note that the last quote is from an individual who had been on academic probation the year before attending the program and earned a 3.5 GPA the semester immediately following the trip.)

**The interaction between design and people** (1) differed from the cultural theme in that it dealt primarily with the impact that landscape architecture can have on individuals and communities. Many students commented on how helpful it was to have a real site with real clients. One commented on how measuring and drawing the base plan helped him understand the site better. The author observed that the students gallantly struggled with what would normally have been the simple task of measuring and making a plan since they had to deal with the metric system, and measurements as well as site features called
out in Spanish by their local assistant. Another student mentioned how helpful it was to meet with the client at what was a very different site then what they, as students, were used to seeing. Many expressed how important it was to have interacted with the community and ultimate users of the sites in order to understand how individuals perceive and use their public space.

Meeting with the different committees in Yaxunah really helped us to get a good understanding of how they functioned in their daily lives and what they wanted most to improve their community. Meeting with both the men and women of Yaxhachen really helped us to understand how to design a park that would benefit both. They all had such different opinions for the park; it was so interesting to hear their ideas. If we had not met with these communities I do not feel that we would have received as much from this experience and our designs would have not been as beneficial to the villages. (P)

Perhaps the most profound comment came from a non-landscape architecture major who wrote:

Over the last weeks I have been thoroughly impressed by the landscape architects, the work they do and how they greatly affect the world around them. The tools that this [profession] possesses must be used to the fullest to insure that the growing population on earth and its urban centers are well planned and arranged to allow for a higher quality life for its citizens. (J)

The previous themes and supporting statements demonstrate that including a service-learning component in the study abroad program greatly enhanced the students’ learning experience. It helped change and form attitudes toward the profession, the people and cultures it serves and their own individual self-respect.

When evaluating the students’ journaling activities against the five levels of the taxonomy of the affective domain, even greater levels of learning and benefit were revealed. The five levels, in increasing order are: Receiving, Responding, Valuing, Organizing, and Characterizing.

Receiving and responding are the two most basic levels of affective learning and are what are expected in a typical classroom setting (Boyd, Dooley, and Felton, 2006). At this level, students are expected to have received information and are to some extent willing to participate and/or accept the information or activity. They are the first stage in the “learning by doing process” (Krathwohl, et al., p. 178). Examples from the students’ writings included the following:

I hope to gain a wider knowledge of being able to please others (other cultures) in my design and to learn to take into [account] everything I see in my traveling to better equip myself for adjusting my views quicker and being able to adapt and change faster and more accurately to what is needed from me and not what I think they need. (S)

The previous individual essentially recited the essence of the program in general, has expressed a willingness to receive and respond, but has not necessarily expressed any value to the activity.

Valuing involves an expression of increased worth. At this level, the individual has committed to the concept, internalized it, and adopted it as his/her own. Examples included:

A landscape architect has a responsibility to care for the land...For myself it means the study of incorporating the concept of sustainable development whenever feasible. (D)

In my opinion the role of the landscape architect is not only to construct but sustain as well. We should plan to design not only for the present but for the future
as well and sometimes we tend to forget that our role as conservationists is very important…. (E)

Organizing involves “(a) the organization of the value into a system, (b) the determination of the interrelationships among them, and (c) the establishment of the dominant and pervasive ones” (Krathwohl, et al., p. 182). In many cases, the students’ writing demonstrated a transfer or comparison of values to their own or other personal situations. Examples include the following:

Working with different cultures in the design process seems as if it would allow one to expand [his/her] horizons. For example, in the U.S. we live a certain way and [are] raised a certain way; it is all we know. However, there is so much more we do not know and many ways to do things. A culture is a culture but no two are alike. By working with others we not only get new ideas, methods, etc, but are able to see the similarities as well. In a sense it seems as if it is not only expanding oneself but uniting different people as well. (E)

So many great things have already come from collaborating with cultural communities, such as medicines, food, history, inventions, etc. So why should we stop there? We should seek other people’s views even though they may not be the same as our own. (R)

Characterizing is the highest level of affective learning and involves “the integration of those beliefs, ideas, and attitudes into a total philosophy or world view” (Krathwohl, et al., p. 184). This level of writing produced some of the most profound statements and demonstrated the writer’s ability to take what is learned or experienced and adapt it to his or her own view of the world. Examples were

By living in the villages of the Yucatan I gained a new interpretation of the value of time and how it corresponds with life. ‘Hay mas tiempo que vida’ [there is more time than life] is nearly the motto of many of them. (J)

’Poor’ is a rich man’s word, and getting to interact with these communities helped me see that. The places we visited are “rich” in their culture, family values, history, etc. and are far from poor. (R)

After reviewing and categorizing the students’ journal writings in terms of the affective domain, the apparent levels of writing from the pre-reflection essays were compared with the post-reflection essays. In almost every case, there was a far greater instance of Organizing and Characterizing in the post-reflection activity. This suggests that the students were highly motivated by both the study abroad experience, as well as the service-learning experience. Their writing demonstrates a profound sense of civic, social and cultural awareness. Although the students’ daily journaling was not formally analyzed, the general perception from a cursory review is that they confirm the increased level of affective learning.

Educational Importance

Lewis and Niesenbaum (2005), in their research on short-term study abroad programs, do not advocate “touristic” experiences. Ecotourism and community-based ecotourism specifically provides an excellent opportunity for students to visit and study in a foreign country and avoid the mass tourist destinations that often overwhelm a civilizations culture, history, and natural settings. Cancun is an obvious example. Lewis and Niesenbaum (2005) further emphasize the promotion of “integrated experiences, including linking the experience to course work, engaging students in a specific community via community-based research and service-learning and teaching students how to use
research skills through interdisciplinary research topics” (p. 257). Working with local communities offers just such an opportunity to connect with specific communities. It also offers the rare opportunity for U.S. landscape architecture students to meet and collaborate with both Mexican and U.S. anthropologists who, in some cases, have been working with the communities for over ten years.

The community-based ecotourism studio project incorporated community design in a cultural and environmental context and provided an intensive learning experience for the U.S. landscape architecture students. The theme is one that lends itself well to a study abroad experience; much more so than the traditional classroom/studio setting. It offered the opportunity for students to work for a client that was looking to solve social issues rather than just design another pretty picture. It demonstrated to the students the power that the design process has to improve people’s lives, as well as the social and civic condition.

Evaluating the program through the analysis of the students’ journaling activities proved to be very enlightening. It also provided insights for improvements. For example, a minimal level of group discussion during the trip would help the students become more aware of what is happening around them. It would help them to focus their writing and help dispel any misconceptions that may arise from unfamiliar cultural or environmental encounters.

An opportunity for future evaluation of the program exists in the analysis of the students’ daily journaling rather than evaluating only the answers to the specific questions. Since they are much more extensive, it would take a considerable amount of time and resources. However, a preliminary reading seems to indicate that there is a point midway through the trip at which the writing takes a significant jump in the level of writing. The addition of the daily journaling would also help overcome the small sampling from which the qualitative research is based by provide a larger amount of data to analyze.

References


