

International Short-Term Service Learning Trip: Assessing Student Perceptions

C. Ben Farrow, P.E., Scott W. Kramer, Ph.D., and David Meek

Auburn University
Auburn, Alabama

Study abroad classes offer opportunities to travel and learn about construction practices in developed countries. However, the cost, duration, and timing of these trips, often prevent some students from being able to participate. Therefore, the faculty at Auburn University organized and implemented a week-long service learning trip to Quito, Ecuador, during the spring semester of 2010. Through this trip, students were given the opportunity to work on an Ecuadorian construction site using rudimentary methods to serve an underprivileged population. Students were surveyed before traveling and after returning in order to determine their perceptions of the trip. The survey results indicated that the students were initially motivated most to participate in the trip by the international and humanitarian aspects of the trip. Students reported that their education had been greatly enriched by the experience specifically citing the hands-on work in an international setting and the opportunity to learn more about another culture. The information gathered from this research will aid in further developing this trip as an on-going study abroad offering.

Key Words: study abroad, service learning, Ecuador, international construction, globalization

Introduction

Construction management programs effectively equip students to change the skyline. Through Building Information Modeling, high performance technologies, new innovations, and different delivery methods, emerging constructors are learning how to transform the face of the American Main Street and of Wall Street. One element that is largely absent in most students' construction management education, however, is the opportunity to study construction in an international context (Lu, Connell, Wang, 2009). Few students are exposed to the radically different building practices of other cultures, and even fewer students have the opportunity to tactilely engage those foreign processes. These experiences not only give participants a more comprehensive global perspective, but they also enrich the educational process and expose the students to alternative career paths.

After a brief survey of ASC member schools' web pages, it can be determined that Construction Management study abroad programs traditionally span a summer semester or occur in the interim between fall and spring semesters. These trips typically consist of three to ten weeks traveling through countries in Europe, Asia, or Australia. They often fulfill an elective or senior capstone requirement. These programs expose students to international issues but are limited to a small group. Due to the duration and travel requirements, the cost of these programs is very high, typically \$6,000 to \$12,000.

Many students encounter barriers to studying abroad (i.e. curricular, financial, and temporal constraints). Trips are limited to people who choose not to pursue traditional summer internships (Lu, Connell, Wang, 2009) and generally to those who do not have to work to pay for their education (Farrow & Kramer, 2009). Only some can afford the high cost. The researchers desired to investigate the viability of short-term, service learning trips as a suitable alternative to long-term study abroad opportunities. Could students who are otherwise unable to participate in international trips garner similar educational value from a one week trip?

Background

The short-term study abroad was in response to Auburn University's President Jay Gogue publishing the University's commitment to increasing study abroad opportunities. Currently 5% of the student body participates in these trips, but according to the school's Strategic Plan, the university desires to increase this number to 25%. The School of Building Science offered two long-term study abroad trips—one to China and one to the United Kingdom during the summer of 2010.

The trip to China occurs during the summer semester and is for students who desire to pursue a special thesis project. The five week trip costs approximately \$9,685 in addition to the cost of airfare and meals. Much like the University's strategic plan and the Dean's vision, the purpose of the program is to "expose students to companies, projects, practices, and construction management professionals that they would never be exposed to otherwise." (Kramer, 2007) The trip to the United Kingdom also occurs during the summer semester and costs approximately \$9,000 in addition to the cost of airfare and food. Similar to the China program, it includes five weeks of structured classes, but the UK program then allows for five weeks of unstructured travel for students to pursue necessary information pertaining to their special thesis projects. Both the China trip and the United Kingdom trip fulfill students' requirements for Thesis and for Temporary Structures. Furthermore, students must plan their schedules accordingly so as to complete all other necessary coursework prior to travel. (Reference Auburn University website)

Literature Review

Research in the area of construction management study abroad trips has become much more common recently compared to ten years ago when it was nearly non-existent. In 2000, the faculty at the McWhorter School of Building Science first offered a summer abroad trip to Europe (Lu, Connell, Wang, 2009). They did so in hopes of broadening students' academic, personal, professional, and cultural worldviews (Kramer, 2004). The trip consisted of two 3-hour courses, one of which was a preparation class that took place during the semester prior to travel. The program has since evolved as an alternative to the traditional senior capstone project.

East Carolina offers a trip to China in which students visit active construction sites, sit in on panel discussions, and visit historical sites as a means to fulfill 6 hours of elective credit (Lu, Connell, Wang, 2009). Before they leave, students must complete individual research assignments which are then compiled as a text book for the trip (Connell and Lu, 2009).

During these ventures, students study materials and methods different from those found in the US, and they learn about delivery methods and project management in the context of global construction firms. While some students go on these trips in order to better equip themselves to be constructors in the international context, many consider a career abroad as a result of studying abroad (Connell and Lu, 2009). As the construction industry globalizes into developing and growing countries and demands young talent from the U.S., students with this unique experience position themselves in the best place to pursue careers in international construction (Kramer, 2004).

Experts on the subject of international education agree that studying abroad is a once-in-a-lifetime opportunity for students to live in a foreign country, adapt to new surroundings, and experience an unfamiliar culture (Reference Auburn University website). Many professors observe that an international experience enhances student learning in a dramatic way and claim it is possibly the most high impact activity of a student's college education (Connell and Lu, 2009). Auburn's Building Science faculty is committed to offering various opportunities because they have noticed that it enriches not only individual students' educational experience but also the depth of the program as a whole (Kramer, 2004).

Many students are unable to participate because study abroad programs are frequently offered during the summer when construction management students typically pursue internships or for some reason the trips do not fit in the student's curricular plan of study (Farrow and Kramer, 2009). The idea of a short-term trip appealed to many of the students who had not previously considered a short term trip. Cost, however, is typically the greatest barrier to widespread participation. The prices of airfare, lodging, meals, and the program itself prohibit many students from experiencing this component of education. One construction management program solicited its advisory board for

scholarships to offset the cost and received two \$1,000 stipends (Lu, Connell, Wang, 2009). Students were also encouraged to apply for general study abroad scholarships offered by the university.

Three Associated Schools of Construction members currently require a service learning component in their curriculum though it can be inferred that many others offer altruistic opportunities (Tinker and Tramel, 2002). Furthermore, a decent body of research exists on humanitarian and service-learning projects in the broader context of design and construction education. At the nexus of human need and educational growth, service learning ultimately equips students to be productive citizens (Stewart, Carr, Anspaugh, 1994). It ingrains a habit of giving back and instills in them a broader understanding of how they can use their skill set to benefit the community after graduation (Tinker and Tramel, 2002). The benefits, however, extend far beyond mere personal and social growth; students also gain invaluable hands-on experience (Stewart, Carr, Anspaugh, 1994).

As the Chinese proverb explains, “I hear and I forget. I see and I remember. I do and I understand” (Stewart, Carr, Anspaugh, 1994). Service learning favors engagement over exposure in order to make the trip a more rich experience instead of a nondescript field trip. It helps students retain the knowledge garnered from the educational investment (Tinker and Tramel, 2002). Service learning trips are an opportunity for students who are inexperienced in the field to gain much-needed hands-on practice in a low pressure situation (Stewart, Carr, Anspaugh, 1994). Successfully using their skills to provide for an immediate need bolsters students’ self-perception of their capability (Layer and Gwaltney, 2009).

The experience also enhances students’ ability to communicate effectively—particularly with the client who is at hand in most service learning situations (Aidoo and Sexton, 2008). Researchers at one institution noted that they had not anticipated the outcome of a strong camaraderie and collaboration as a result of the trip. Students developed their leadership and teamwork abilities and were able to synthesize information and solve problems with their peers (Stewart, Carr, Anspaugh, 1994). Finally, service learning trips foster a unique dynamic between faculty and students that typically does not occur in a traditional classroom setting. Working alongside one another, students develop a greater respect for professors and professors a friendship with the students (Tinker and Tramel, 2002).

Trip to Ecuador

Based on these findings, two faculty members of the McWhorter School of Building Science at Auburn University began organizing a short-term service learning program in the spring of 2008. For this initial trip, they planned to travel to Quesimpuco, Bolivia, but they were unable to travel due to political unrest. Building off of this experience, though, they planned an 8-day service learning trip to Quito, Ecuador, for the spring of 2010. They offered the trip in hopes that it would appeal to students who would not have otherwise been able to study abroad. To try to limit a common barrier to participation, they limited the cost to \$1,800 and traveled in late February 2010. Class credits were not offered for participating in the trip. Initially 8 students planned to travel, though two later dropped out due to financial and medical reasons. One additional team member from the community that had ties to the Building Science department was also added to the trip as a participant. The final group consisted of undergraduate and graduate students from the McWhorter School of Building Science as well as Design-Build graduate students along with the one community member. The trip happened in conjunction with the School of Nursing’s service learning opportunity which took 17 nursing students to Quito to conduct a women’s health clinic.

The collaborative trip was coordinated through Servants in Faith and Appropriate Technology (SIFAT) a non-profit organization headquartered in Lineville, Alabama. SIFAT is a faith-based group that promotes holistic development in South America and Africa. They maintain offices and full-time staffs of nationals in both Bolivia and Ecuador and seek to support sustainable self-help among needy populations. The Auburn group relied heavily on this local Ecuadorian network to prepare for the projects to be completed during the February trip.

The group worked on an on-going construction project called Dulce Refugio, an after school care center for underprivileged children. The project will be built in two phases over the course of several years as funds and volunteer labor become available. The first phase involves the construction of a 4-story, 30,000-sf children’s center which is being built on an urban site adjacent to an existing church building. The concrete structure will serve approximately 300 children. The second phase calls for the eventual demolition and re-construction of the church building. The group of 6 students and 2 faculty members worked for five days at the jobsite. During this time, they

formed and placed a grade beam (Figure 1) and four round columns (Figure 2). The group practiced many means and methods foreign to the students which included building round column forms from tongue and groove floor boards (Figure 3), hand tying all rebar cages, and mixing concrete by hand directly on a flat concrete slab (Figure 4) with shovels. The team had the opportunity to work alongside the Ecuadorian nationals. Two craftsmen, an engineer, and the pastor of the church directed the construction process, and though they were initially skeptical of the North Americans' ability, they formed strong working relationships of mutual respect by the end of the week.



Figure 1: Grade Beam



Figure 3: Column Forms



Figure 2: Column Rebar



Figure 4: Mixing Concrete

Exhausted from the laborious tasks and the extreme altitude, the team typically ended their day around the middle of the afternoon in order to embark on numerous cultural excursions throughout the city. Students had the opportunity to stand on the equator at the “Middle of the Earth” and to climb the highest spires of the Basilica del Voto Nacional which has been under construction for 123 years. The group also rode the Teleferico, a gondola which transverses 3,000 feet to an altitude of 13,000 feet above sea level and offers an unparalleled view of the city. For another side trip, students traveled to a nearby rainforest for a zip line ecology tour. Additionally, they experienced Ecuadorian culture by touring various open air markets, local hardware stores, and eating typical dishes. Perhaps the most rewarding experience, however, was interacting with the center’s many kids in a North Americans vs. South Americans soccer match. This provided invaluable insight to the lives of the building occupants and owners.

Methodology

The researchers conducted a two-part survey to evaluate the students’ experiences on the trip relative to their expectations. Students were asked to fill out a pre-trip survey while in route to Ecuador and then a post-trip survey during the return trip. The purpose of the pre-trip survey was to look at students’ perceptions in the following areas:

- Motivation for going on the trip
- Desired benefits by participating in the trip
- Students’ funding sources

- Students' knowledge about Latin America
- Challenges anticipated during the trip

The purpose of the post-trip survey was to look at students' perceptions in the following areas:

- Satisfaction with the trip
- Actual benefits by participating in the trip
- Students' perceived value of the trip
- Students' acquired knowledge about Latin America
- Actual Challenges experienced during the trip

In order to achieve these objectives, students created an anonymous code name which was used consistently through both surveys. The pre-trip survey is included as Appendix A. The post-trip survey was not included due to space limitations within the paper.

Though the results of the study are representative of the group that traveled, they may not be statistically sound due to the relatively small survey population. In order to achieve more definitive numbers, future trip participants will need to complete the same survey. Most of the questions were numerically quantified on a Likkert scale of 1 to 5, though some were short answer or were rated on a scale of 1 to 4. The numerical average was then used to determine common trends.

Results

A total of seven surveys were collected based on the students that attended the Ecuador trip. This represented 100% of the students that participated in the trip. Students included four graduate students and three undergraduate students all enrolled in the Building Science Curriculum. This survey gave insight into the student's perspective of the trip.

Pre-Trip Survey

How much did the following aspects influence your decision to participate (in the trip)? (1 is not a factor, 3 is some factor, and 5 is the most important factor): Students ranked humanitarian reasons, international experience, and educational value as important factors in their decision to participate (Mean values of 4 or greater). Students saw the short duration and cost of the trip as somewhat important factors (Mean values of 3.2 to 3.3).

When deciding to go to Ecuador, how important were the following potential benefits in making that decision? (1 is not a factor, 3 is some factor, and 5 is the most important factor): Students ranked the following items as the highest potential benefits: Learning about a different culture, hands-on experience, personal growth, understanding of international construction, and career/professional development. All of those responses received mean values of 4 to 4.33 indicating they were "important factors". Less important to students were their concern about global awareness and overall interest in study abroad opportunities.

Prior to the trip, how much did you know about the following? Students all indicated that they knew very little about Ecuador, Latin-American culture, Construction practices in other countries, and spoken Spanish.

Prior to the trip, students were asked to rank their apprehension about the following challenges. (1 is very apprehensive, 3 is somewhat apprehensive, and 5 is not at all apprehensive) Students were not very apprehensive about any of the topics posed. Items students were asked about included language barrier, differing construction practices, differing cultural practices, physical condition (altitude), physical labor, culture shock, team dynamics, and differing environment. Students ranked all of these items between 4 and 4.83 on our scale indicating a general lack of concern about the challenges.

Post-trip Survey

In relation to your desired benefits, to what degree did the following benefits actually meet your expectations? (1 is did not meet my expectations, 3 is met my expectations, and 5 is exceeded my expectations) All items listed including hands-on experience, learning about a different culture, personal growth, increased global awareness, understanding of international construction interest in further study abroad opportunities, and increased teamwork skills indicated student expectations were met or exceeded (mean scores of 4 to 5). The hands-on experience and the category of learning about a different culture both scored a 5 indicating all of the students expectations were exceeded.

To what degree were you satisfied with the following aspects of the trip? (1 is un-satisfied, 3 is satisfied, and 5 is extremely satisfied) Students were extremely satisfied (mean scores of 4.8) with the project team, the work done at the project site, and the excursions. They enjoyed the hands-on experience and the host organization (mean scores of 4.5). They tended more toward satisfied in regard to the accommodations (mean score of 3.8). All students were extremely satisfied with the excursions taken after work each day by the team (mean score of 5.0).

Relative to your knowledge prior to the trip, how much do you know about the following things? (1 is no more, 3 is a good deal more, and 5 was a lot more) Students indicated they knew little additional Spanish (mean score of 2). Students felt they knew a good deal more about Ecuador, Latin-American culture, and Construction practices in other countries (mean score of 3.3)

Would you recommend the trip to a friend considering study abroad? (1 is definitely not, 3 is maybe, and 5 is definitely) All students stated they would recommend the experience to a friend (mean score of 4.7). All but one said they would go on the same trip again if offered during their time in school.

How much (in dollars) was the experience of the trip worth? How much (in dollars) would you be willing to pay for this experience? Students responded that the trip had a mean dollar value of approximately \$1700. This value was slightly less than the cost paid by the students of \$1800.

Authors' Analysis and Conclusions

The humanitarian aspect was the greatest motivation students supplied for participating in the trip. When asked what they desired to get out of the trip, students most hoped to gain hands-on experience, personal growth, and a better understanding of international construction. Students had an average of 28 months of field experience, but there is no apparent correlation between experience and desire for hands-on opportunities. However, this humanitarian motivation likely correlates with the common service inclination among those born after 1980 (*Teaching the Millennial Generation*, 2008). It can be expected, therefore, that this would continue to be a strong impetus for future trips.

The pre-trip survey revealed that students knew very little about Ecuador, Latin American culture, and construction practices in other countries. For the post trip survey, however, students claimed that they felt significantly more educated on these issues as a result of the trip. The post-trip survey also revealed that the trip participants' expectations were exceeded in every category.

Based on the survey results the researchers were surprised to see that the short duration and relatively low cost were the least important factors contributing to the participants' decision to go on the Ecuador trip. This could be attributed to the great length of time that passed between when students paid and when they traveled. Also surprisingly, an interest in study abroad opportunities ranked lowest on the motivation. Of all of the aspects of the trip, students were most satisfied with the afternoon excursions. This was somewhat unexpected because these outings were unplanned and generally spontaneous. Lastly, students were challenged more than expected by the differing construction and cultural practices.

Recommendations

It is difficult to make accurate conclusions based on the small survey population. Future trip participants would also need to be surveyed to gain conclusive results. Based on these results, it is unclear whether or not students perceive the service-learning trip as an alternative to study abroad opportunities. It is also undeterminable if students gain similar educational value from the trip relative to its long-term counterparts.

Though researchers anticipated that students would feel the cost of the trip was too high for the experience they received, nearly every participant felt like the trip was worth the full price paid. They did suggest, however, that the trip include a class component in the future. Several students recommended that the trip be part of a Temporary Structures or Safety class. It is likely that even more students would be interested in the service-learning trip if it fulfilled a class requirement.

Future trips should also implement cultural excursions in the itinerary. These opportunities were typically spontaneous, yet they were some of the most valuable experiences of the trip. These side tours should be interspersed throughout the trip in order to give students a break from the arduous work at the jobsite and to expose them to the local culture.

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Appendix A

Pre-Trip Survey to be completed by construction students prior to arrival in Ecuador.

Background

Students will provide an anonymous code name of their choice to be consistently used for the pre-trip and post-trip survey. This will allow analysis of the measurable benefits and perceived value relative to the cost of the trip.

Code Name: _____

Motivation

	Not a factor	Small Factor	Some Factor	Important Factor	Most Important Factor
1. Indicate how much the international aspect of the trip affected your choice to participate.	1	2	3	4	5
2. Indicate how much the humanitarian/ charity aspect of the trip affected your choice to	1	2	3	4	5
3. Indicate how much the educational value of the trip affected your choice to participate.	1	2	3	4	5
4. Indicate how much the short duration of the trip affected your choice to participate.	1	2	3	4	5
5. Indicate how much the cost of the trip affected your choice to participate.	1	2	3	4	5

Desired Benefits

6. When deciding to go to Ecuador how important were the following potential benefits in making that decision?	Not a factor	Small Factor	Some Factor	Important Factor	Most Important Factor
Hands-on experience	1	2	3	4	5
Learning about a different culture	1	2	3	4	5
Personal growth	1	2	3	4	5
Increased global awareness	1	2	3	4	5
Understanding of international construction	1	2	3	4	5
Interest in study abroad opportunities	1	2	3	4	5
Career / Professional Development	1	2	3	4	5

Sources of Funding

7. Of the total funds required for the trip, what percentage were contributed by the following groups	> 25%	25-50%	50-75%	75-100%
Personal Funds	> 25%	25-50%	50-75%	75-100%
Corporate Sponsor	> 25%	25-50%	50-75%	75-100%
Immediate Family	> 25%	25-50%	50-75%	75-100%
Extended Family	> 25%	25-50%	50-75%	75-100%
Faith-based Organization	> 25%	25-50%	50-75%	75-100%

Previous Knowledge

	Knew Nothing	Knew Very Little	Knew Some	Knew a lot	Very familiar
8. Prior to the trip, how much do you know about Ecuador?	1	2	3	4	5
9. Prior to the trip, how much do you know about Latin-American culture?	1	2	3	4	5
10. Prior to the trip, how much do you know about construction practices in other countries?	1	2	3	4	5
11. Prior to the trip, what level is your Spanish speaking and comprehension ability?	1	2	3	4	5

Predicted Challenges

12. Indicate your level of apprehension about the following challenges.	Extremely Apprehensive	Somewhat Apprehensive	Not at all Apprehensive		
Language Barrier	1	2	3	4	5
Differing construction practices	1	2	3	4	5
Differing cultural practices	1	2	3	4	5
Physical Conditions (altitude)	1	2	3	4	5
Physical Labor	1	2	3	4	5
Culture Shock	1	2	3	4	5
Team Dynamics	1	2	3	4	5
Differing environment (food, amenities, etc.)	1	2	3	4	5