Preventing a boondoggle: assuring a short term research abroad activity is an educative experience

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Abstract

Purpose – At Embry-Riddle Aeronautical University, an annual short-term, research abroad non-credit program was created in 2012 as a core component of the undergraduate research initiative that achieves learning outcomes in a meaningful way. The paper aims to discuss this issue.

Design/methodology/approach – In order to describe, and analyze the short-term research abroad activity, an instrumental case study design was created. The instrumental case study was chosen as a means of allowing the facilitators/authors to communicate how they attempted to assure that the program was educative. In order to determine if the program was in fact educative and that it met its goal of being an effective research experience the authors utilized two additional research methods. The first was a document analysis of the participant's research artifacts. Each participant was required to communicate their findings by writing a paper that was submitted for publication to an applicable research journal.

Findings – The study found that an experiential education as a pedagogical framework coupled with a short-term research abroad activity can lead to a substantive educative experience, where the authors described and analyzed attempts to ensure that the short-term research abroad program was educative, it also describes the educational assessment findings which describe what was found when the authors tested whether they, in fact, met this goal.

Research limitations/implications – During the design phase of the short-term research abroad program, the authors turned to experiential education as a principle for how they would ensure that the program was grounded in an acceptable educational theory. Experiential education is a widely accepted educational practice used in experiences such as co-ops and internships, study abroad, undergraduate research and service learning.

Practical implications – To frame the short-term cultural research abroad program as something from which student could learn the authors utilized the National Society of Experiential Education's (2013) list of eight principles of good practice. In order to safeguard that an activity is educative, an assessment or an evaluation of a demonstrative artifact is essential. In assessing the final artifact against a rubric or some other non-biased or less biased criteria, an educator can ensure that the student has gained new knowledge in the form of student learning outcomes (SLOs). In addition, the educator can use the results of this assessment to modify many different aspects of the experience ranging from the timing, the modality, the pre-work, even the learning outcomes themselves.

Social implications – Given financial and curriculum inflexibility of some students, Universities and faculty could achieve attainment of research-based, program agnostic, SLOs by offering short-term study abroad alternatives to the traditional semester or year-long experiences. With graduates looking to enter the job market where businesses are more globalized and executive's recognition of a need for more international experience, carefully constructed short-term study abroad programs are meaningful avenues to build those credentials.

Originality/value – Such offerings can be constructed as customized experiences to achieve highly integrated skills across all degree programs.

Keywords Experiential learning, Student learning outcomes, Study abroad, Research abroad

Paper type Research paper

Introduction

Student learning outcomes (SLOs) are typically written and decided upon by faculty in institutions at a high level and do not change rapidly or often. In contrast, the pace of globalization, cultural knowledge, trade agreements, regional political stabilities, technology and population growth change constantly and, sometimes, at breath-taking speeds. One could argue that this sampling of topics and currency of their presentation should be included in a university curriculum (American Council on Education, 1937). To meet these emerging learning opportunities and industry needs, many universities encourage some form of study abroad or experiential learning as a viable part of academic curriculum. The key to the value and rigor of these study abroad programs to the student's academic preparation is the intersection of SLOs with a substantive study abroad experience (Barr and Tagg, 1995). However, not all students or degree programs have the flexibility in their curriculum sequence as well as the financial means to spend an entire semester studying at an international institution. Therefore, the need for a short experiential program that does not necessarily fulfil a credit hour requirement but can be customized to each student's interest, and added to their skill set, was desired and attempted (Fried, 2006; Gentry, 1990).

At Embry-Riddle Aeronautical University, an annual study abroad, non-credit program focused on research was created in 2013 as a core component of their quality enhancement plan as part of the accreditation submission package of 2012 to the Southern Association of Colleges and Universities. Each year, the Ignite Abroad office sponsored two faculty researchers to take students to international countries during their two-week spring break. Students were charged for the entire price of the experience less a stipend if they fulfilled the poster or publication requirements for the research. What is a unique requirement of the ERAU program, students were required to select a topic to research, complete their literature search and methodology prior to the experience, present at one of three pre-trip meetings, conduct research while traveling, and, finally, culminate in presenting a poster or submitting the final research for publication. Further, the challenge of constructing this study abroad experience was to tailor the experiences and deliverables so that it aligned with the SLOs of the quality enhancement plan called Ignite, while not targeting or relating to a specific degree program. What is unique about this Ignite student abroad from other study abroad offerings is that any student from any degree program and at any point in their college career is an appropriate candidate for this type of a research program (Weimer, 2002). Many majors at the University do not have open electives, so a tuition-driven research abroad program would not have appealed to students in the STEM fields. This flexibility also enabled the researchers to create the program without progressing through all the curriculum change policies that would be required if credit would be awarded for the experience. Additionally, the short-term non-credit nature of the program appealed to National Guardsman and ROTC students, a large component of the student body, both of which have found it difficult to do a full credit program and be gone from their military obligations during a longer term trip or over multiple weeks during the summer.

The Ignite research abroad program has also been adopted and customized by other programs at the University, some offering credit, stipends for research and other entry requirements.

To support the mission and vision, Embry-Riddle implemented its Quality Enhancement Plan known as Ignite, in the 2012–2013 academic year. This initiative sought an active learning environment dedicated to systematic inquiry to solve problems or to advance knowledge. The research-supportive curriculum provided undergraduates with a learning experience rooted in the process of discovery through research and inquiry. Implementation focused on undergraduates, following a tiered plan of introduction, practicing and mastery of research skills. The enhanced research culture included course-based research and curricular/co-curricular research and academic support services.

Ignite developed six SLOs to encompass the basic principles of research in every discipline. Infusing the SLOs into the curriculum enabled students to graduate with a strong foundation in research principles. The Ignite SLOs are as follows:

(1) define and/or articulate a research problem;

(2) design a course of action to solve a research problem using appropriate multidisciplinary principles;

(3) apply ethical principles in research;

(4) conduct research independently and/or collaboratively;

(5) reach decisions or conclusions based on the analysis and synthesis of evidence; and

(6) communicate research results.

These six learning outcomes applied to every undergraduate student in every degree program at ERAU.

Literature review

Sponsors of college study abroad programs have often claimed benefits such as broadening a student's resume and increasing the student's marketability in their job search after graduation (Gertz, 2009). As Friedman coined in his series of popular books, as the global economy is becoming flatter, more crowded and hotter, the value of an international education experience has grown (Friedman, 2005). The literal definition of studying abroad is the act of pursuing educational opportunities in a country other than one's own. In a narrow interpretation, studying abroad is the educational activities for pursuit of academic credits toward a degree. However, studying abroad has evolved to an international educational exchange that combines academic and experiential learning in a foreign setting (Hoffa, 2007a, b). This evolution has shown that study abroad can be conducted with various targeted outcomes as the goal and can be successfully implemented in varying lengths of time. The field of study abroad as a scholarly experience is a fledgling one.

In 2006, US Senators Richard J. Durbin and Normal B. Coleman stated in the proposed Abraham Lincoln Study Abroad Act (2006) 13 reasons study abroad is critical to the nation and its citizens that include global literacy, values sharing, cultural awareness, regional specializations, expanding personal interest, practical training and an understanding of international affairs (Abraham Lincoln Study Abroad Act, 2006).

Job prospects after graduation are seeking a foothold in a world that values global experience (*New York Times*, 2015). A survey of over 800 US executives reported that almost 40 percent of companies missed international business opportunities because of a lack of internationally competent personnel (Daniel *et al.*, 2014). Employers' attitudes toward study abroad provide additional support for students to have international experience. Trooboff *et al.*'s (2008) study results provide significant support for the belief that employers value study abroad in hiring recent university graduates. Their data indicate that students are personally enriched by study abroad and there is an explicit connection between student learning abroad and enhanced possibilities for gainful employment following graduation. Universities respond by offering an international experience that fosters learning and is relevant to the student's curriculum and future plans (Bransford *et al.*, 2000). These international experiences take the form of paid or unpaid internships, work, volunteer opportunities or a study abroad experience (Jacoby, 1996). During 2012–2013, the Institute of International Education (IIE) estimated that over 35,000 Americans participated in international work, internships or volunteer activities. A 2014 survey by the IIE found that 84 percent of their alumni reported their international experience helped them build job skills and 89 percent reported gaining employment within six months of graduation (Institute of International Education, 2014). However still, by 2018, the number of US

students participating in a study abroad experience of various lengths amounts to only 1.6 percent of all undergraduates (National Association of Foreign Student Advisors, 2019).

The best experiences, not always the reality of study abroad programs, include those that are integrated to the student's curriculum and related to their career goals whose outcomes are easily articulated in resumes and job interviews. "Employers are looking for graduates who can communicate well with others, both in person and in writing. They know the importance of cross-cultural understanding and an appreciation for different points of view" (Curran, 2007).

As American companies continue to grow into global markets, and do business on a world stage, global competence skills continue to be mentioned as a desired employability skill of the entry-level candidate. In the state of today's economy, college graduates are now facing tough competition for this entry-level position. "Candidates need both depth (i.e. mastery in their chosen field and additional fields as they grow professionally) and breadth (i.e. expanded communication and boundary-crossing skills, global understanding, developed self-awareness)" (Vakos, 2010, p. 17). Universities and colleges have recognized the role they play in preparing students not only for the depth, but also for the breadth. One of the ways universities and colleges have enhanced a student's breadth is to incorporate global competence skills into coursework, projects and learning outcomes (Adderley *et al.*, 1975). For the purpose of this study, the "breadth" is operationally defined as Global Competence or "an open mind while actively seeking to understand cultural norms and expectations of others, and leveraging this gained knowledge to interact, communicate and work affectively outside one's environment" (Hunter *et al.*, 2006, p. 6).

In this particular case, Embry-Riddle has begun to provide global competence skills and related learning outcomes while also introducing students to research methods by to combining three experiential learning activities: cultural studies, study abroad programs and undergraduate research. By combing these three practices, students are able to reap the benefits of each of the unique pedagogies, including an introduction to a comparative study of human behavior and society from the cultural studies and short-term study abroad program and practicing the skills related to research and methodology training from the undergraduate research side of the experience (McLellan, 1996; Schroeder, 1999). In addition to gaining the benefits of each of the three pedagogies, the combined pedagogy also inherits the challenges and critics. Because the purpose of this study is to determine if a short-term research abroad activity can be educative, it is essential that these criticisms be understood.

Cultural studies by its very nature is rich in multidisciplinary perspectives and borrows from the traditions and research methodologies of anthropology, education, sociology, humanities and the study of popular culture. Those involved in cultural studies often celebrate the benefits that come from its interdisciplinary nature and the rich data that can come from a discipline that embraces all manners of research methods. However, opponents twist these benefits into criticisms by suggesting that because cultural studies do not neatly fit into a particular academic silo, the disciple must not be academically sound. To ensure that the critics are not accurate students of cultural studies must take all precautions to ensure that data collection and analysis methods are followed and that the data are collected in an ethical manner.

The program, Embry-Riddle, has engaged in over the last five years and has been overwhelmingly praised for its ability to expose students to numerous targeted global awareness outcomes and providing hands-on opportunities for students to conduct cultural studies-based research. Yet, like many short-term study abroad programs, the research abroad program does still elicit criticisms from those that believe that short-term experiences limit the amount of learning and exposure, those that believe that it is too expensive, and those that believe that short-term programs are boondoggles rather than academic experiences (Milleret, 1990).

While these criticisms are not the dominant opinion in the current case, the faculty researchers who led the program have always believed it is essential to the future of this and other similar programs and the programs budget outlook that proof be presented showing whether short-term study abroad programs are, in fact, academic experiences. In recent years, a number of studies have been conducted and have found that well-planned study abroad programs, no matter the lengths, have reliably demonstrated a capacity to promote a deep learning environment and that students demonstrate mastery of targeted learning outcomes at a higher rate than they would learn those same outcomes through more traditional instruction (e.g. McKeown, 2009; McLaughlin and Johnson, 2006; National Survey of Student Engagement, 2007). In addition, Perry *et al.* (2012) found "that when coupled with an adequate pedagogical framework, short-term study abroad could serve as an educative opportunity for fostering transformative learning environments where new experiences and perspective may be developed" (p. 682).

Methodology
In order to describe, and analyze the short-term research abroad activity, an instrumental case study design was created and is supported by literature. The instrumental case study was chosen as a means of allowing the facilitators/authors to communicate how they attempted to assure that the program was educative with a small group of subjects (students) (Yin, 2008; Zainal, 2007). In order to determine if the program was, in fact, educative and met its goal of being an effective research experience, the faculty researchers utilized two additional research methods. The first was a document analysis of the participant's research artifacts. Each participant was required to communicate their findings by writing a paper that was submitted for publication to an applicable research journal. Outside evaluators from faculty at the University not involved in the student abroad experience assessed the research papers against the following six targeted SLOs: define and/or articulate a research problem; design a course of action to solve a research problem using, as appropriate, multidisciplinary approaches; apply ethical principles in research; conduct research; reach decisions or conclusions based on the analysis and synthesis of evidence; and communicate research results. The evaluators each used a standard rubric and participated in a rubric calibration and training session before evaluating the artifacts (Walvoord, 2010). Additionally, numerous observations were captured in field notes during the short-term research abroad program. These descriptive notes included relevant portraits of the student participants, description of the environment, day-to-day reflections of the participants, relevant activities that occurred, observed behavior and descriptions of the learnings that were observed (Woodward, 1998). While evaluators outside the University were not incorporated into the assessment plans, the number of student artifacts that were accepted for publication or presentation at professional and academic conferences can be viewed as an indicator of the success of the students' scholarly work.

Results and discussion
Reflectivity
Since this case study relies on multiple qualitative research methodologies, it is essential that the facilitators/authors consider their own bias and the role in which they played in the research. In order to ensure that the authors considered these factors, reflexivity was necessary. Nightingale and Cromby (1999) suggest that:

> Reflexivity requires an awareness of the researcher's contribution to the construction of meanings throughout the research process, and an acknowledgment of the impossibility of remaining "outside of" one's subject matter while conducting research. Reflexivity then, urges us to explore the ways in which a researcher's involvement with a particular study influences, acts upon and informs such research. (p. 228)

Chief among the ways in which the authors influenced, acted upon and informed this particular research were their roles within the research. As Unluer (2012) points out, "it is crucial for social researchers to clarify their researchers' roles especially for those utilizing qualitative methodology to make their research credible" (p. 1).

Within this particular study, both authors were insider or practitioner faculty researchers. Increasingly common in educational, medical and psychological research, practitioner or insider research is characterized by Brannick and Coghlan (2007) as research completed by members of organizations in and on their own organizations. Within this case, the authors were the designers of the short-term research abroad experience and participated as the research advisors for each of the participants. As advisors, the authors accompanied the students to China and Hong Kong (2014), Singapore, Indonesia and Malaysia (2015), Brazil (2016), Cuba (2016), Iceland (2017), observing and taking field notes in order to determine the effectiveness of the program. While the authors were available to answer general research methodological questions, each student served as the primary investigator of their own research (Landis *et al.*, 1998; McCombs and Whisler, 1997). In addition to serving as research advisors, the authors also served as experiential education facilitators, ensuring that the students reflected on their experiences and that Dewey's (1933, 1938) five essential steps of reflection were achieved.

Insider researchers are often criticized as being inherently biased and too close to provide an objective view of the phenomenon being researched. The authors felt it was essential to both acknowledge this viewpoint and to ensure that they designed methods to prevent such criticism from being true. In terms of evaluating the learning that occurred, the authors used a standard rubric utilized for all undergraduate research at the authors' institution and solicited outside reviewers of the student's research artifacts. These outside evaluators were neither involved in the development of the research abroad program, discussed in this paper, nor were they involved in the research the students undertook.

Ensuring an educative design

During the design phase of the short-term research abroad program, the authors turned to experiential education as a principle to ensure that the program was grounded in an acceptable educational theory (Beard and Wilson, 2006). Experiential education is widely accepted educational practice used in such experiences as co-ops and internships, study abroad, undergraduate research and service learning (Chapman *et al.*, 1995). Experiential education is rooted in the writings and research of Dewey (1938), Lewin (1951), Kolb (1984) and many others. Boud *et al.* (1993) point out that experiential education at its most basic "is the act of framing some aspect of experience as something from which we can learn" (p. 8).

To frame the short-term cultural research abroad program as something from which student could learn, the authors utilized the National Society of Experiential Education's (2013) list of eight principles of good practice:

Regardless of the experiential learning activity, both the experience and the learning are fundamental. In the learning process and in the relationship between the learner and any facilitator(s) of learning, there is a mutual responsibility. All parties are empowered to achieve the principles which follow. Yet, at the same time, the facilitator(s) of learning are expected to take the lead in ensuring both the quality of the learning experience and of the work produced, and in supporting the learner to use the principles, which underlie the pedagogy of experiential education.

The National Society for Experiential Education (2013) principles include the following.

Intention

Intention requires that the experience and the learning be deliberate and set by the entire group, not just by one well-meaning facilitator. This takes a considerable amount of time

and should occur as early as the planning phase. All parties must understand why an activity or the experience is being chosen and what learning outcomes can/should occur because of the chosen activity. While there are many appropriate learning opportunities that occur unexpectedly (e.g. unexpected interactions with locals, lessons about sanitation when experiencing a pit toilet for the first time, etc.), in order to ensure that an experience is educational, it is essential that there be a purposefulness to the experience. All goals, plans and outcomes should align to the outcomes that have been set. As an educator you cannot rely on a tour of the city to teach, you must align your goals, schedule and plans to the learning outcomes that you and your students intend to achieve.

Ensuring intention
Intention began well before the trip, the pre-meetings, and even the schedule planning began. The authors chose the intention even before they chose the site for the location. The authors set out to plan an international trip that would lend itself to students having an experience different than any they have ever had before, while, at the same time, the trip had to be conducive to allowing cultural exploration and research. The authors shared the intention in every advertising, recruitment meeting, and every pre-travel meeting that was held. The six SLOs of research were discussed from the outset and everyone was made aware of the purpose and intention of the trip. To ensure that the students understood the intention, the participant application asked questions related to the six SLOs as well as globalization-focused questions. Students were chosen as researchers based upon how well they seemed to understand and be willing to support the research intention of the trip. The participants were made well aware of the purpose of the trip before they were even made aware of the day-to-day schedules of the trip.

Preparedness and planning
The preparedness and panning principle requires that the researcher, students and other parties be involved and invested in the planning and preparation of the trip. Not every trip abroad is flexible enough to allow the faculty advisor, much less the student participants to make changes to the schedule, or to the types of activities that will culminate in the experience. However, where possible, the group should consider the intention of the trip and the learning outcomes, being flexible to changes that will amplify the learning outcomes. A trip to the Patroness Towers may seem like a natural stop, but in a short-term cultural research study, a visit to the Batu Caves may be a more applicable and educational excursion. As the group planning occurs, it is essential that the intentional learning goals, and objectives, be mapped to the activities taking place as part of the experience.

Ensuring preparedness and planning
In order to ensure preparedness and planning the short-term cultural research team held four orientation style meetings, before traveling to Singapore, Malaysia and Indonesia in 2015 and Brazil in 2016. During the first meeting, discussions were held about the potential locations that would be part of the trip and what the students should expect for the location to be like. The participants were encouraged to suggest alternative locations, especially if an alternative location would provide them a better environment for their research projects. Between the first and second meeting at three and two months out before the 2015 trip, one of the participants did come forward with an alternative travel plan. The participant proposed to go to Kuala Lumpur rather than to the city of Johore Bahru. When presented with the reasons of why Kuala Lumpur fit the learning outcomes better than Johore Bahru, the authors and other participants made an intentional move to a new location. This move was able to occur because the participants were included in the earliest stages of planning

the experience. Over the five years, the research advisors were better able to set itineraries that would lend enriching experiences to the students and limited changes in the program.

Authenticity
The authenticity standard draws its purpose from the research of Lombardi (2007), who argues authentic learning promotes judgment, patience, ability to recognize patterns in unfamiliar contexts and flexibility to work across cultural and disciplinary boundaries. In internships authenticity is doing actual meaningful work of the field you are studying rather than getting coffee and picking up the bosses dry cleaning. In study and research abroad programs, authenticity is eating in local restaurants rather than McDonalds, staying in the non-touristy portions of the city, speaking the language of the people, riding the same form of transportation; it is about immersing yourself in the culture.

Ensuring authenticity
Rather than staying in the Hyatt and eating at the four star hotels, the participants stayed in local accommodations, for instance, a guesthouse on a rice farm in Indonesia that was once a person's home, and ensured that the students experienced the culture rather than experiencing what it is like to be a tourist in a foreign country. It also exposed the group to trash piles and numerous rats all in the name of authenticity. Since the students understood the importance of intentionality during the visit, they each stretched beyond the familiar and worked to experience something more authentic (Freire and Freire, 2004). An example was a visit to the Singapore's Little China where the students forwent the air-conditioning and fork and knife chain restaurants choosing to eat from street vendors and hawker stalls, enabling the students to interview locals in their own environment rather than in an environment more familiar to the participant.

Critical reflection
For any learning to occur as a result of having gone through an experience, critical reflection and a "connecting the dots" of the experience to some lesson must occur (Astin *et al.*, 2000; Cone and Harris, 1996; Eyler and Giles, 1999).

Considering the need for reflection through the lens of construction and constructivism, the educational paradigm aligned with experiential education:

> Constructivism […] posits that learning is an active, constructive process. The learner is an information constructor. People actively construct or create their own subjective representations of objective reality. New information is linked to prior knowledge, thus mental representations are subjective. (Learning Theories, n.d., para. 1)

Without reflection, the student is unable to facilitate and master the learning properly. At its most basic, each experience is like a piece of a giant puzzle. Without looking at the piece, determining its pattern, its color, its size and other physical features one may never know what to do with the puzzle piece. That piece of the puzzle may be on the table, but it will not serve its purpose if it is not considered and reflected upon. The same is required of experiences in order for someone to master the experiential learning and embody the lesson for future application, a reflective exercise must occur (Schoïn, 1983).

Ensuring critical reflection
Within this particular case, the authors chose to facilitate discussion and reflection in both informal and formal ways, each time utilizing the DEAL model for critical reflection (Ash and Clayton, 2004; Ash and Clayton, 2009; Blimling, 2011; Grossman, 2009). The purpose of the DEAL model is to define critical reflection with each letter standing for a different aspect of reflection with a learning outcome in mind. The "D" in the DEAL model stands for

"describe the experience." The "E" is "examine," with an eye toward the course content. The "A" and the "L" represent "articulate learning," which can manifest in a number of ways including the answers to who, what, where and why. Ash and Clayton (2009) point out that the DEAL model is effective regardless if spoken or written, individual or group format, in-depth or cursory review.

Attendance at a Brazilian soccer match provided an excellent opportunity to utilize the DEAL model. While originally proposed as an evening social event, one of the authors suggested that the event would intersect well with several students' research projects on human resilience and homeland security. Using the flexibility built into the experience, the authors engaged the students in reflection prior to the Soccer match. The social event then evolved into a learning experience as students thoughtfully attended the match. Follow-up DEAL discussions and results were incorporated into papers, which fulfilled the reflection part that is essential to experiential learning (Beard and Wilson, 2006) (Figure 1).

Orientation and training
Within a study abroad experience, there may be numerous activities requiring orientation and training. For example students who have never entered a Buddhist temple or a Muslim mosque are far more comfortable and culturally aware if they are provided an orientation before they attend the experience. The orientation provides the men and women the opportunity to prepare to have the correct attire, understand the faith-based traditions and meet the cultural expectations of the particular house of worship (Gilligan, 1977). There are literally hundreds of other activities that must be considered, from how to dial 911 out of the USA, which is generally not 911 to how to greet and individual. With so many cultural and legal differences, orientation and training is an essential component to any research abroad experience.

Ensuring orientation and training
Within this particular case, several hours of the pre-meetings were devoted to both cultural sensitivity and personal safety. Beyond the cultural aspects of this case, the researchers also needed to be introduced to appropriate research methods that fit with the research questions that the students choose to explore. Methodologies for the 2015 and 2016 research experiences included Quick Ethnography (Handwerker, 2001), Rapid Qualitative Inquiry (Beebe, 2014) and Narrative Inquiry (Clandinin and Connelly, 2004). Since both facilitators are credentialed to teach the university's introduction to research course, they were both qualified and able to ensure that the students were introduced, practiced and assessed for proficiency in their chosen methodology.

Figure 1.
Modified version of the DEAL model
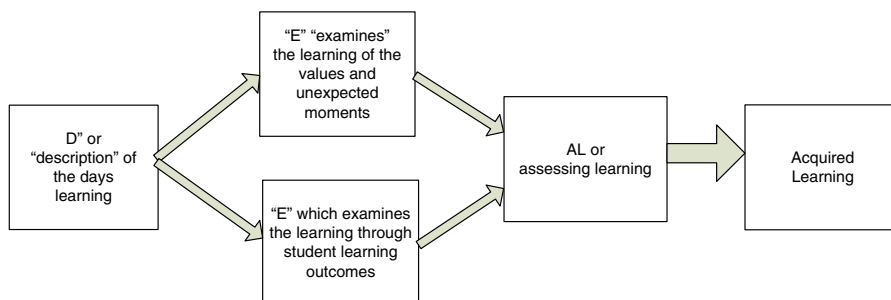
Source: Ash and Clayton (2009)

Monitoring and continuous improvement
When using a short-term research abroad activity as an educative tool, the unforeseen can and often does occur. It is impossible to believe a ten-day research trip can occur without some need for the facilitators and student to adjust their research/learning plan. If the facilitators and students are not flexible, these typical changes in schedule, setbacks and challenges can derail the learning environment even if the experience moves forward. In the event an unexpected occurrence impedes learning from occurring, new sets of plans should be considered. When adjustments occur, the facilitator should learn from these issues and work to improve future activities and experiences. In addition, these setbacks can also be an opportunity for unexpected learning opportunities that when framed through the DEAL model can provide unexpected learning opportunities.

Ensuring monitoring and continuous improvement
During the experiences discussed in this case there were multiple times where schedules were altered or plans were changed. Typically, these changes had no negative bearing on the students, their research or their learning; however, there were a few times had the facilitators not been monitoring the experience that challenges would have altered the learning for the group. In Indonesia, monitoring was required as an airline gate agent was exacting bribes as an exit tax on foreign travelers. While the amount was relatively minimal, their power was significant, as without the official's stamp, the group could not pass immigration to exit the country. When the fact that the gate agents were taking advantage of an old policy with uninformed travelers was fully discovered, several students demanded their money back as armed board agents began to take notice of the growing tense situation. As part of the monitoring duties, one of the facilitator immediately took over the situation retrieved the students' funds and safely navigate the group to the airplane for departure. Without this monitoring, the students would still have likely been able to depart, but the situation was in the process of elevating between several students, the airport official and security, by intervening the facilitator defused the situation. Once clear of customs, the facilitators were able to have a discussion regarding business principles, cultural norms and safety. This experience specifically informed the research of one student's discussion of the maturity of the air transportation industry in Indonesia: the current set of safety and graft would need to be significantly improved in order for extensive investment by foreign entities would allow the industry to expand.

Assessment and evaluation
Assessment and evaluation are essential aspects of ensuring that any activity is more than a boondoggle. In order to safeguard that an activity is educative, an assessment or an evaluation of a demonstrative artifact is essential. In assessing the final artifact against a rubric or some other non-biased or less biased criteria, an educator can ensure that the student has gained new knowledge in the form of SLOs. In addition, the educator can use the results of this assessment to modify many different aspects of the experience ranging from the timing, the modality, the pre-work, even the learning outcomes themselves.

Ensuring assessment and evaluation
Built-in to the experience is both an opportunity to communicate their research results while, at the same time, being assessed and evaluated. In order to ensure the students were assessed for the original intention of this trip the students were informed from the outset that they would be required to publish an article in the institutions undergraduate research journal or an industry-related research journal. The rubric utilized for the students' artifacts is described in Table I.

		Mastery	Practicing	Introductory	Novice
SLO 1	Define and/or articulate a research problem	Articulates and explores a clear, complete, significant and complex question	Articulates and explores a clear, complete and somewhat significant question	Articulates and explores a question	Does not articulate and/or explore a question
SLO 2	Design a course of action to solve a research problem using, as appropriate, multidisciplinary approaches	Employs a sophisticated research strategy and shows thorough understanding of research methods	Employs a sound research strategy and shows adequate understanding of research methods	Employs a simple research strategy and shows basic understanding of research methods	Employs no research strategy and/or shows no understanding of research methods
SLO 3	Apply ethical principles in research	Employs an appropriate system for documentation and citation, indicating a thorough understanding of the principles and process of ethical research	Employs an appropriate system for documentation and citation, indicating an adequate understanding of the principles and process of ethical research	Employs an appropriate system for documentation and citation, though there may be some lapses indicating a limited understanding of the principles and process of ethical research process	Employs no appropriate system for documentation and citation, indicating little to no understanding of the principles and process of ethical research
SLO 4	Conduct research	Reveals sophisticated research skills by offering research that has depth and breadth appropriate for target audience and assignment	Reveals adequate research skills by offering research that may lack some depth and breadth but is appropriate for target audience and assignment	Reveals simplistic research skills by offering research that lacks some depth and breadth and may be only somewhat appropriate for target audience and assignment	Reveals no research skills by offering no research and/or research that is inappropriate for target audience and assignment
SLO 5	Reach decisions or conclusions based on the analysis and synthesis of evidence	Offers thorough analysis and synthesis of research that results in insightful and logical analysis, argument and/or conclusions	Offers adequate analysis and synthesis of research that results in appropriate and mostly logical analysis, argument and/or conclusions	Offers minimal analysis and synthesis of research and/or contains mostly logical yet simplistic content, analysis, argument and/or conclusions	Offers little to no analysis and synthesis of research and/or contains illogical analysis, argument and/or conclusions
SLO 6	Communicate research results	Demonstrates a thorough understanding of context and audience, consistently relays meaning clearly and concisely, and scrupulously adheres to the conventions of the language and the specific discipline	Demonstrates an adequate understanding of context and audience, usually relays meaning clearly and concisely, and adequately adheres to the conventions of the language and the specific discipline	Demonstrates some understanding of context and audience, sometimes relays meaning clearly and concisely, and adheres to some the conventions of the language and the specific discipline	Demonstrates little to no understanding of context and audience, rarely relays meaning clearly and concisely, and rarely adheres to the conventions of the language and the specific discipline

Table I.
Assessment rubric

Acknowledgment

The National Society for Experiential Educators (2013) suggests that all parties of an experiential learning activity be recognized for their part in the learning that occurs during the activity. Students should be encouraged to acknowledge their mentors, supervisors and support staff who assist in their learning experience (Hara, 2009; Jensen *et al.*, 2007). Faculty and other educators should, in turn, acknowledge the students and assist the student in sharing any new knowledge, skills and changes in attitudes, which have occurred in the planned experience through activities such as reflection, presentation and documentation.

Ensuring acknowledgment

In order to ensure that the students received acknowledgment for their learning, an end of semester dinner was planned with the Chancellor and University Provost. During the dinner, the students were both recognized for their accomplishments and asked to provide an abstract of what they had learned. In addition to writing the required papers, a number of students also created research posters which were displayed and presented during the University Undergraduate Research Discovery Day. The students as well as the mentors were recognized for their work by the Office of Undergraduate Research in their annual report and in their Discovery Day programs. During the 2015 Discovery Day, one of the short-term research abroad students took home the second place prize for best individual research project. This was repeated in 2016 when another short-term researcher took home the third place for the same award category. This external recognition was an additional acknowledgment for both the student and their advisor.

Findings

Where the earlier section set out to describe and analyze how the authors attempted to ensure that the short-term research abroad program was educative, the next section describes findings which describe the attainment level of the skills the student's demonstrated using the rubric evaluations by scorers. In short, the faculty found that they had met their goal of assured the short-term research abroad was education, but did not hypothesis what skill level the students would demonstrate.

Table II reflects the overall research skill level attainment as evidenced by the assessments of student work. Overall, student work demonstrated mixed outcomes when compared to the desired targets of at least all students performing at least at a Practicing competency level. The desired goals were hypothesized by the faculty who created the research abroad experience. In hindsight, some of those targets were probably too lofty. As mentioned previously, this program was open to all students at any point in their academic career; therefore, the amount of academic preparation they brought to the experience was uneven despite the best efforts of faculty pre-trip seminars on research skills and building a research proposal. Faculty, overall, remark that more specific practicing experiences need to be provided throughout the curriculum with a detailed explanation of what proficiency

| | Research abroad papers: 36 articles for publication, 6 posters for external presentation | | |
	Introductory	Practicing	Mastery
SLO1	4	18	14
SLO2	9	18	9
SLO3	18	18	
SLO4	4	26	9
SLO5	11	14	9
SLO6		27	9

Table II.
Assessment scores

attainment is expected as represented in the Rubric. If this was instituted, it would increase the likelihood that students would come to this experience with, at minimum, an introductory research skill level and mature their skill level during and after the study abroad experience.

In addition, a significant number of students performed at the Mastery level. Faculty attribute this to the more degree-advanced student as well as the students who pursued submission to external conferences to provide substantive evidence of global experience and research skills for their resume. Students who performed at a Mastery level were the students that continued to work with their faculty advisor in developing manuscripts and posters for presentation. Qualitatively, there were clear demonstrations of student buy-in in their developing their research skills during the study abroad experience (Billington, 1997). They became more engaged during the design and presentation of their research, many choosing topics they plan to pursue post-graduation and an increasing number presenting their work at conferences and publishing in peer reviewed or trade journals.

Implications
This particular study was conducted to establish evidence that a short-term study abroad experience could be educative and meaningful as well as explore areas that can be improved in a replication or the program in different contexts such as a focused discipline or geographical region. Now that the faculty has data and experience, formalizing the program content, support and expectations can be constructed so that other Faculty can create and lead their own research abroad experience in a specific discipline but have a standardized tool to quantify the skills attainment of participating students.

Conclusion
As the need for global citizenship and a globally-developed workforce increases, the need for variants of the traditional semester abroad study will increase. While this study did set out to research the attainment of a meaningful study abroad experience based on duration, it did confirm that students did successfully attain SLOs in a structured, non-credit, short-term study abroad experience. These findings confirm that such programs can make a unique contribution to college outcomes despite the non-credit student experience as students can be required to product a document such as a poster or manuscript that then can be represented on a graduates resume illustrating the unique co-curricular learning experience. By using longitudinal data from one program at one university, any conclusions made should not be generalized across large populations. However, the data from this study can supply colleges and universities the evidence about the usefulness of a customized research or study abroad experience. This model can be successfully replicated and inform other college and university organizational practices and educational policies as well as have a potential to make a considerable impact in teaching and learning using non-traditional methods. Given the financial and curriculum inflexibility of some students, Universities and faculty could achieve attainment of research-based, program agnostic, SLOs by offering short-term study abroad alternatives to the traditional semester or year-long experiences. In fact, the National Research Foundation offers funding for International Research Experiences for Students for US science and engineering students for the purpose of developing a diverse, globally-engaged workforce with world-class skills using a research-based experience (Mills and Treagust, 2003; National Association of Foreign Student Advisors, 2019). The overarching long-term goal is to enhance US leadership in research and education and to strengthen competitiveness through training the next generation of research leaders. All colleges and universities can use this model of experience as a model for their own educational activities as well as activities supported by external funders.

Such offerings can be constructed as customized project-based experiences to achieve highly integrated skills across all degree programs (Nor, 2008; Savery and Duffy, n.d.). With graduates looking to enter the job market where businesses are more globalized and executives' recognition of a need for more international experience, carefully constructed short-term study abroad programs are meaningful avenues to build those credentials.

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