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Improving Outreach Activities — Mentoring Youth in a Structured Skills-Based Development Program Increases Personal Growth of College Students Studying Abroad

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Abstract

As study abroad education becomes increasingly common, so does the need to understand how different outreach opportunities alter the study abroad experience. To determine how outreach program design links to perceptions of personal growth, we surveyed 72 college students who participated in different youth outreach activities while studying abroad. Being a mentor in a sequenced, active, focused, and explicit (SAFE) youth outreach program increased the probability of perceived personal growth in college students by 27% relative to unstructured outreach activities in the same location. Thus, we suggest the SAFE framework be considered when designing youth outreach activities. Additionally, 44% of respondents considered outreach options as a factor when selecting a

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study abroad program. Combined, these findings provide an incentive for study abroad organizations to invest in structured youth outreach opportunities for their clientele—in what may be a triple-win opportunity for study abroad organizations, their students, and youth in host country locations.

Abstract in Spanish

A medida que los programas para estudiar en el extranjero se vuelven más comunes, también lo hace la necesidad de entender cómo los diferentes programas de voluntariado impactan la experiencia de estudiar en el extranjero. Para determinar cómo el diseño de programas de intercambio se relaciona con la percepción de crecimiento personal en la población estudiantil encuestamos a 72 estudiantes universitarios que participaron en diferentes actividades de voluntariado para jóvenes mientras estudiaban en el extranjero. Ser mentor en un programa de alcance juvenil secuenciado, activo, enfocado y explícito (SAFE) aumentó la probabilidad de crecimiento personal percibido en estudiantes universitarios en un 27 % en relación con las actividades de alcance no estructurado en el mismo lugar. Con estos hallazgos, sugerimos que se considere el marco SAFE al diseñar actividades de intercambio para jóvenes. Asimismo, el 44% de los encuestados consideró las opciones de voluntariado como un factor al seleccionar un programa de estudios en el extranjero. Combinados, estos hallazgos brindan un incentivo para que las organizaciones de estudios en el extranjero inviertan en oportunidades estructuradas de alcance juvenil para su clientela, en lo que puede ser una oportunidad triplemente beneficiosa para las organizaciones de estudios en el extranjero, sus estudiantes y los jóvenes en las ubicaciones del país anfitrión.

Keywords:

Outreach, service-learning, program design, marine conservation

Introduction

During 2017 alone, over 330,000 American students studied abroad for academic credit, a near three-fold increase since the year 2000 (Institute of International Education, 2017, 2019). As more study abroad programs are developed and marketed to students, researchers and educators have turned their attention to determining the specific aspects that make studying abroad rewarding for both students and the communities within which they are temporarily embedded. Early research largely focused on assessing how

international experience affected students' feelings of confidence, career goals, and global perceptions (Koester et al., 1985; Carlson et al., 1990). More recently, the study abroad literature has grown to compare the different types of programming available and consider the degree to which students engage with local communities or participate in service-learning (Dixon, 2015; George, 2014).

International service-learning occurs when students participate in an organized outreach activity, learn from cross-cultural interaction, and reflect on this experience. Service-learning can lead to a deeper understanding of course content, appreciation for the host country, and greater awareness of what it means to be a global citizen (Bringle & Hatcher, 2011). However, international service-learning and study abroad outreach opportunities have the potential to cause negative cultural, social, and environmental impacts in host communities that outweigh the positive benefits of 'service' (Wood et al., 2011). For example, poorly planned service-learning can divert attention away from proper social policy reform, affect children due to inconsistent relationships, and further economic inequalities (Eby, 1998; Schroeder et al., 2009; Wood et al. 2011).

Many international service-learning opportunities involve volunteers working with children (Eby, 1998) via youth outreach activities. However, there remains limited empirical research regarding how different types of youth outreach initiatives affect local youth, host communities, or study abroad students. Moreover, no prior studies consider how mentorship pairings and differences in programmatic structure influence the personal growth of youth or study abroad students engaging in these programs. Here we address the following portion of this gap in the literature: Does the type of youth outreach opportunity that student abroad students participate in influence their perceptions of personal growth? Using the School for Field Studies (2019) Center for Marine Resource Studies' (CMRS) youth outreach program in South Caicos, Turks, and Caicos Islands (TCI) as a case study, we examine the impacts of a programmatic shift that occurred between the Fall 2015 and Spring 2016 semesters in the type of youth outreach opportunities offered.

Our investigation into the relationship between different types of youth outreach opportunities and the perceptions of college student participants originated from a consultancy to identify potential outreach program improvements for CMRS. As part of this endeavor, we received Human Subjects Institutional Review Board exemption, conducted open-ended interviews with

staff members, and independently surveyed 72 former CMRS study abroad students. We analyzed the program structure of CMRS outreach activities in conjunction with student feedback through the sequenced, active, focused, and explicit (SAFE) framework. In this publication, we focus on the findings of this student feedback survey that are most relevant to study abroad professionals globally as they design youth outreach programs.

Review of Youth Program Design

With no existing scientific literature on how particular youth outreach activities impact local youth or study abroad students, we grounded our case study in literature on structuring after-school programs. An analytical review of this literature was used to explore how best practices in this field may apply in the context of both our case study and more generally to study abroad youth outreach. Studies of after-school programs found that a program must be organized and sequenced to keep young students engaged, motivated, and actively learning (Boylan et al., 1997). Durlak et al. (2010) performed a meta-analysis of different after-school programming strategies and recommended implementing a SAFE framework, which consists of four recommended practices: sequenced (S), active (A), focused (F), and explicit (E). Sequenced requires “connected and coordinated set of activities to achieve their objectives relative to skill development” (Durlak et al., 2010, p. 298). Active requires “active forms of learning to help youth learn new skills” (Durlak et al., 2010, p. 298). Focused requires at least one component devoted to developing personal or social skills. Explicit requires the program specifically target and remain driven to improve said skills as well as include specific and identifiable objectives. SAFE after-school programs have been found to significantly increase academic skills, school bonding, and positive self-perceptions for youth, as compared to after-school programs that did not meet the criteria of this framework. Thus, the SAFE framework is considered highly effective in enhancing youth’s academic and personal development in an after-school setting (Durlak et al., 2010).

The literature on youth programming more broadly suggests that mentoring programs foster leadership skills for both the mentor and mentee (Zachary, 2002). As a mentee, leadership skills are gained by having a role model (Campbell et al., 2012; Nora & Crisp, 2007). As a mentor, self-esteem and the capacity for leadership are often increased. Mentors also gain competency within their field by advancing their teaching skills and strengthening their commitment to teaching (Huling & Resta, 2001).

We hypothesized that CMRS students would experience personal growth through participation in activities further along the SAFE framework continuum. We also hypothesized that CMRS students would benefit from participating as a mentor in a skills development program with coordinated activities and specific goals. To test these hypotheses, we analyzed the responses of 72 college students who studied abroad at CMRS from Fall 2015 to Summer 2016. Principally, we asked if participating in a youth outreach activity with greater SAFE structure and mentorship opportunities increased the probability of personal growth for study abroad students in comparison to participating in youth outreach activities with little structure. Our analysis considered two additional questions relevant to student abroad professionals: 1) “To what extent do college students consider the opportunity to participate in community outreach when they select a study abroad program?” and 2) “Would college students studying abroad be interested in additional youth outreach responsibilities and leadership opportunities?”. We conclude by considering the broader implications of these findings for study abroad programs globally.

Methods

Site Description: The Center for Marine Resource Studies

The School for Field Studies (SFS) is a nonprofit organization that directs field-based study abroad programs for college students at eight locations around the world. In TCI, the SFS operates the CMRS on the small fishing island of South Caicos, where it hosts a study abroad program for approximately 30 college students each semester, primarily from the United States. South Caicos is home to 1,200 residents, ~70% of whom depend directly or indirectly on the local small-scale lobster, conch, and coral reef finfish industries (Lockhart et al., 2007). Here, CMRS students take applied coursework in marine ecology, environmental policy, and resource management. A central component of the CMRS student experience that helps to differentiate it from competitor study abroad programs is the requirement of students to participate in youth outreach activities (Table A4). These include active games, quiet games, arts and crafts, swim lessons, and Snorkel Club (renamed and restructured as Research Club in 2016). College students at CMRS are expected to devote a minimum of three hours per week to community outreach during their semester abroad. From Fall 2015 to 2016, the only outreach activities coordinated by the center were youth outreach activities. This aspect of the program is considered key to helping students develop a well-rounded understanding of South Caicos and is

highlighted as one of the most rewarding parts of the study abroad experience (School for Field Studies, 2019).

To facilitate these mandatory community outreach hours, CMRS opens its doors to community youth every Saturday afternoon, a time referred to as Saturday Outreach. While CMRS does not have explicit goals associated with Saturday Outreach, it advertises that study abroad students will build leadership skills, increase self-confidence, and discover how they fit into the larger global community. Collectively, these advertising foci suggest personal growth of students is an underlying goal of Saturday Outreach.

During Saturday Outreach, CMRS students had the opportunity to participate in structured or unstructured mentorship activities. CMRS students signed up on a first come, first serve basis each week to participate in the different activity stations. For most stations, study abroad students stayed at their assigned station with little mentorship or guidance from CMRS staff, while South Caicos youth moved freely between stations. With the “roving” programmatic design of the active games, quiet games, and arts and crafts stations, there were no explicit opportunities for CMRS students to mentor South Caicos youth. These activities, along with the swim lessons, were considered unstructured non-mentorship activities since no pairing between a college student and local youth lasted longer than 20 minutes and no explicit instructions were given as to how to swim with the children in the pool.

Snorkel Club and Research Club, however, were considered structured, skills-based mentorship activities, because CMRS students provided snorkel training to local youth buddy pairs. The original Snorkel Club program focused explicitly on building in-water snorkeling skills of South Caicos youth, who were accompanied by their CMRS student mentor.

Explicit marine education and a set of sequenced activities were originally beyond the scope of Snorkel Club. However, at the beginning of the Spring 2016 semester, CMRS sought to combine its commitment to youth education and marine conservation by launching the Research Club as a Saturday Outreach activity, replacing Snorkel Club (Figure 1). Research Club was designed with the explicit goal of empowering youth who had previously completed swimming lessons and snorkel training to become junior researchers. Junior researchers garnered a combination of marine education in the classroom and offshore snorkeling-based data collection and data review.

Research Club activities included approximately two hours of sustained engagement between mentors and their mentees. Through restructuring the program, college students were assigned a youth buddy pair for the day and received additional guidance through a sequenced set of education and research activities from CMRS staff.

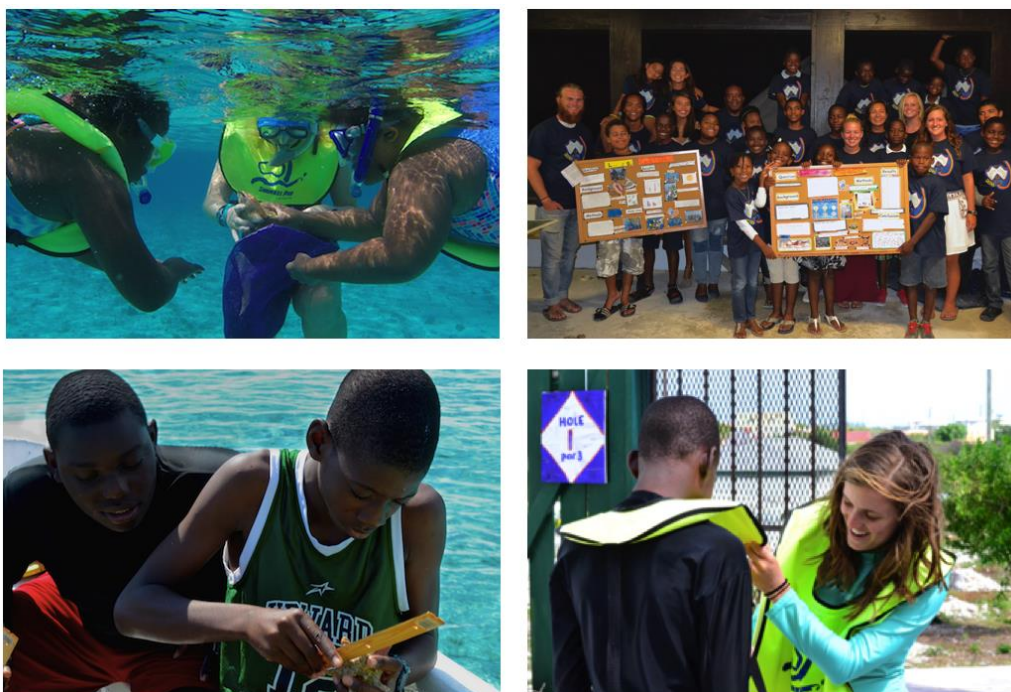


FIGURE (1): RESEARCH CLUB¹

We did not examine the effect of Snorkel Club/Research Club (as compared to less structured non-mentorship activities) on the personal development of South Caicos youth. However, we hypothesized that the SAFE qualities and the mentorship pairing of Snorkel Club/Research Club provided greater personal development and targeted skills for youth than the alternate activity stations, based on the impact of SAFE structure on after-school program youth reported by Durlak et al. (2010).

Unlike the after-school program analyzed in Durlak et al. (2010) which emphasized benefits for youth, an assumed additional focus of study abroad

¹ In spring 2016, Research Club was designed to replace snorkel club, a mentorship program focused solely on in-water skill development, as a marine education activity. Research Club included the additional elements of classroom marine education and youth marine research activities such as long-term monitoring of conch abundance, fish assemblages, and coral bleaching within a local marine protected area.

youth-related programs is to improve the study abroad experience. We questioned how greater SAFE programmatic structure may influence the personal growth of mentors themselves, in this case, CMRS study abroad students. We conceptualize SAFE structure as a continuum (Figure 2) and hypothesized that participating in Saturday Outreach activities further along the SAFE continuum led to greater personal growth in CMRS students. While the personal growth of CMRS students was not an explicit goal of Snorkel Club/Research Club, we hypothesized that participating as a mentor in a skills development program with coordinated activities and specific goals benefitted CMRS students in this manner.

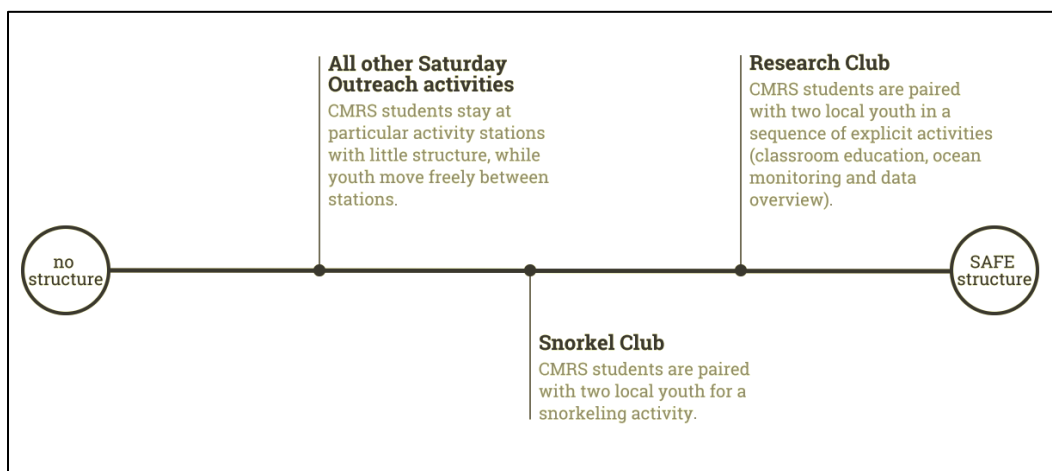


FIGURE (2): A CONCEPTUAL DIAGRAM OF WHERE CMRS SATURDAY OUTREACH ACTIVITIES FALL ALONG A SAFE PROGRAM CONTINUUM

An entirely SAFE structured program must have a coordinated and connected set of activities, implement active forms of learning, remain driven to improving skills, and include specific and identifiable objectives. Research Club had the highest degree of SAFE principles for South Caicos youth as compared to Snorkel Club and alternate Saturday Outreach activities, i.e., active games, quiet games, arts and crafts, and swim lessons.

CMRS Alumni Survey

An online survey of 10 questions was sent in May 2017 to 109 college students that studied abroad at CMRS in Fall 2015, Spring 2016, and Summer 2016. In the contact message, students were notified that the survey was anonymous and conducted externally from SFS to inform future improvements to the program. Survey questions were primarily multiple choice and included the Likert scale of strongly disagree to strongly agree (Likert, 1932). The final

question, however, was open-ended, prompting students to provide suggestions for how Snorkel Club/Research Club could further benefit future CMRS students and/or South Caicos youth. The survey began by querying respondents on the Saturday Outreach option they signed up for most often and requesting this activity be kept in mind for the remainder of the survey.

In the context of this survey, both Snorkel Club and Research Club were considered marine mentoring activities, while only Research Club was considered a marine education and mentorship program. As Snorkel Club did not include a research or marine education component and was only available in Fall 2015, Snorkel Club could be disaggregated from Research Club based on the semester during which the respondent studied abroad. For simplification and thus broader applicability, we were specifically interested in whether participating in a mentoring outreach activity influenced the probability of the perception that youth outreach had contributed to the respondent's overall personal growth. Thus, perceived personal growth was included as a binomial variable for regression analysis, where “Strongly agree” and “Agree” were pooled and compared to “Neither agree nor disagree”, “Disagree”, and “Strongly disagree”. An ordered logistic regression, where personal growth was included as an ordinal variable, produced comparable findings (Table A1 and Table A2 of the Appendix).

All quantitative survey questions, response options, and the method by which they were included in regression models are provided in Table (1). The free-response suggestions for programmatic improvement offered by former students were qualitatively coded into broad categories of similar suggestions and synthesized.

Survey Question	Response Options	Modeled Variable
When did you study abroad at the Center for Marine Resource Studies?	"Fall 2015", "Spring 2016", "Summer I or Summer II 2016".	Semester: categorical variable of when the respondent studied abroad.
Which Saturday Outreach option did you sign up for most often? (For the rest	"Snorkel Club/Research Club", "Swim lessons", "Active Games", "Arts and	Outreach activity: binary variable of activity type where all activities besides Snorkel Club/Research have been pooled together (See

of the questions keep this activity in mind).	Crafts", "Quiet Games", "Other".	Appendix for use as a categorical variable).
To what extent do you agree with the following statement, "Participation in this outreach activity significantly improved my study abroad experience or led to personal growth"?	"Strongly agree", "Agree", "Neither agree nor disagree", "Disagree", "Strongly disagree".	Personal growth: binary criterion variable where "Strongly agree" and "Agree" have been pooled and compared to the options of "Neither agree nor disagree", "Disagree", "Strongly disagree" pooled. (See Appendix for use as an ordinal variable, from 1 to 5).
Did the ability to participate in community engagement factor into your decision to study abroad at the Center for Marine Resource Studies?	"No it was not a consideration", "Yes it was a small factor", "Yes it was a large factor", "Unsure/don't remember".	Initial motivation: ordinal variable, with "No it was not a consideration", "Unsure/don't remember", "Yes it was a small factor" and "Yes it was a large factor" included as -1, 0, 1, 2 respectively.

TABLE (1): MULTIPLE CHOICE SURVEY QUESTIONS, RESPONSE OPTIONS AND THE METHOD BY WHICH THEY WERE INCLUDED IN REGRESSION MODELS (N = 72)

Regression Analysis

We used a binary logistic regression model to investigate the relationship between personal growth, initial motivation, the semester of participation in the program, and outreach activity type (Cohen et al., 2003). Here, the term “personal growth” refers to perceived personal growth from the outreach activities of college students. Model inputs included outreach activity (i.e., Snorkel Club/Research Club or an alternate activity) and the semester of program participation (i.e., Fall 2015, Spring 2016, and Summer 2016). Initial motivation is comprised of respondents' answers to the question, “*Did the ability to participate in community engagement factor into your decision to study abroad at the Center for Marine Resource Studies?*” and was originally incorporated as an ordinal potential explanatory in the initial model (Akaike Information Criterion [AICc]: 78.0). Initial motivation was found to be insignificant ($p=0.562$) and removed the final version of the model (AIC: 73.6). The final equation of the binary logistic model was:

$$\text{Log odds}(\text{Personal growth}) = \beta_0 + \beta_1(\text{Outreach Activity}) + \beta_2(\text{Semester}),$$

where Log odds is $\ln(p/(1-p))$ and p refers to the probability of perceived personal growth from participating in youth outreach.

Derived probabilities of different youth outreach activities contributing to perceived personal growth were calculated by transforming the original binary logistic model $e(\beta n)$ and inputting each combination of the significant predictor variables of semester and activity type. All analyses were conducted using R statistical computing, software version 3.5.1 (R Core Team, 2018). Comparable probabilities were calculated from the ordinal regression that considered responses regarding personal growth on the ordinal Likert-scale (Table A1).

Interest in Mentorship Responsibility

We also asked students if they would have considered applying for hypothetical youth outreach leadership roles if they had existed during their study abroad experience. Potential titles included Swim Instructor, Snorkel Instructor, Ocean Research Mentor, Long-term Monitoring Project Leader, and Classroom Marine Educator. Students were able to check all that applied or choose to not apply for any leadership position. These hypothetical titles and their descriptions were selected to provide a range of responsibilities that former program staff felt students could have realistically carried out with guidance. The survey explicitly stated, "each of these roles would come with a title and additional responsibilities and would mean you would not have been able to try out the other Saturday Outreach Activities".

Results

72 former students voluntarily responded (66% response rate) to the 2017 survey. Responses were evenly split between semesters, with Fall 2015, Spring 2016, and Summer 2016 students accounting for 35%, 29%, and 36% of responses, respectively. All possible outreach activities were represented in the survey pool and included arts and crafts (18%), quiet games (14%), active games (13%), swim lessons (28%), SnorkelClub/Research Club (25%), and other (e.g., extra safety watch for the pool [3%]).

Regression Results

Nagelkerke (Cragg and Uhler) index (0.315) and the chi-square likelihood ratio test result ($n = 72$, $\chi^2 = 17.51$, $p < .001$) support the utility of the binary logistic regression model as a means to quantify the relationship between outreach participation and personal growth. Participating in Snorkel Club/Research Club was positively associated with personal growth ($p = 0.014$), as compared to having participated in an alternate activity (Table 2). Spring

2016 and Summer 2016 program participation were also increasingly associated with personal growth from youth outreach, as compared to the reference level of attending CMRS in Fall 2015. Whether outreach opportunities factored into the student's initial motivation to attend CMRS was not significantly associated with their level of perceived personal growth from outreach. The above relationships between explanatory variables and personal growth were also consistent when considering personal growth on the ordinal scale through ordered logistic regression analysis (O'Connell, 2006) (Table A2).

<i>Dependent variable:</i>			
Personal growth			
	Value ± se	z value	p-value
Intercept	-0.75± 0.54	-1.37	0.166
Outreach activity:			
Snorkel Club/Research Club	2.25± 0.91	2.47	0.014
Semester:			
Spring 2016	1.98± 0.77	2.55	0.011
Summer 2016	2.62± 0.81	3.22	0.001

$\text{LogOdds}(\text{Personal growth}) = \beta_0 + \beta_1(\text{Outreach Activity}) + \beta_2(\text{Semester})$, where any alternate outreach activity to Snorkel Club/Research Club and Fall 2015 serve as reference levels for Outreach activity and semester, respectively (n= 72). Significant p-values are bolded.

TABLE (2): BINARY LOGISTIC REGRESSION FOR THE RELATIONSHIP BETWEEN OUTREACH PARTICIPATION AND PERSONAL GROWTH

Probabilities of Personal Growth

College students participating in more developed programming for marine education mentoring were significantly more likely to perceive that youth outreach improved their study abroad experience and/or led to personal growth. This finding held, regardless of whether the opportunity to participate in community engagement factored into why respondents chose to study abroad at CMRS. The estimated probability of perceived personal growth ranged from 32 ± 12% (alternate activities, Fall 2015) to 98 ± 2% (Research Club, Summer 2016).

In all three semesters, the likelihood of feeling that youth outreach had contributed to one's personal growth was greater for those who most often participated as a mentor in a structured skills-development mentorship program rather than in an alternate outreach activity— all of which were non-

mentorship activities that fell lower on our SAFE continuum. In comparison to other youth outreach activities, the probability of personal growth from youth outreach participation was 50%, 20%, and 11% greater for marine mentorship activities (Snorkel Club and Research Club) for Fall 2015, Spring 2016, and Summer 2016, respectively. This led to an average of 27% greater likelihood of perceived personal growth from serving as a mentor when aggregating semesters (Figure 3). This relationship of greater perceived personal growth from Snorkel Club/Research Club remained consistent when disaggregating the alternate outreach activities into individual options (Table A3).

As Snorkel Club transitioned to Research Club from Fall 2015 to Spring 2016, the probability of perceived personal growth from outreach increased from $82 \pm 12\%$ to $98 \pm 2\%$. In other words, as the activities became more sequenced, the goals of the program became more explicit, and research and education added into the curriculum, respondents were more likely to perceive that participating as a mentor in this youth outreach activity improved their study abroad experience or led to their own personal growth.

Additionally, holding the program's intended degree of SAFE structure and mentoring constant (i.e., comparing Spring 2016 and Summer 2016 sessions), the probability of perceived personal growth from any outreach activity increased over the study period. This result may be related to the fact that the staff facilitating youth outreach were new employees beginning in Fall 2015 and were able to provide more coherent programming as their own work experience grew. In each cohort, study abroad students also develop their own culture related to youth outreach, so variation in study abroad group dynamics may have affected their perception of how youth outreach impacted their own development and study abroad experience. Additionally, Summer 2016 is composed of two, month-long programs whereas Fall and Spring semesters were four months each. Higher probabilities of personal growth regardless of outreach activity for Summer 2016 as compared to the other semester may also indicate that youth engagement is perceived particularly influential during short-term study abroad experiences.

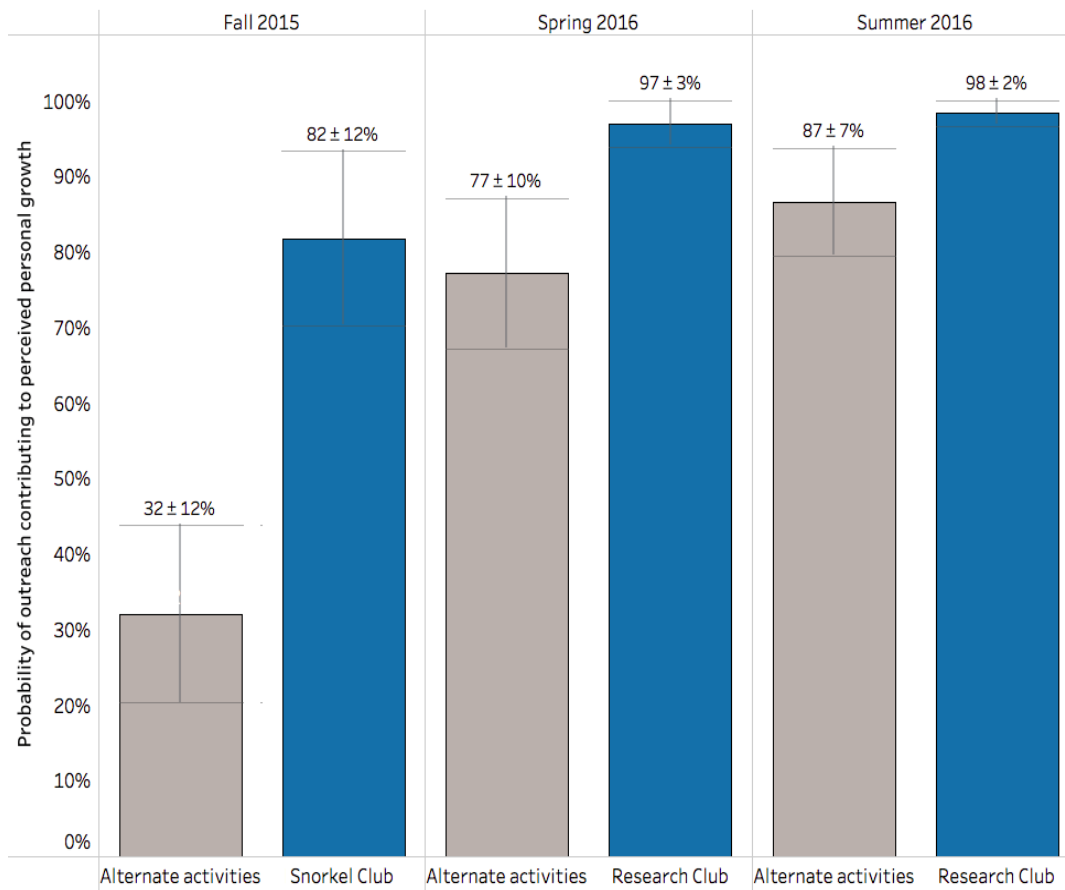


FIGURE (3): THE PROBABILITY OF DIFFERENT OUTREACH ACTIVITIES CONTRIBUTING TO PERCEIVED PERSONAL GROWTH OF COLLEGE STUDENTS (\pm SE). PROBABILITIES ARE DERIVED FROM THE BINARY LOGISTIC MODEL, BASED ON WHETHER STUDENTS PARTICIPATED IN A YOUTH MENTORSHIP PROGRAM (SNORKEL CLUB OR RESEARCH CLUB) FOR THEIR MOST COMMON YOUTH OUTREACH ACTIVITY AS COMPARED TO ALTERNATE ACTIVITIES (STATIONS WITH LITTLE STRUCTURE). NOTE THAT WHEN SNORKEL CLUB BECAME RESEARCH CLUB IN SPRING 2016 IT TRANSITIONED FROM A MENTORSHIP PROGRAM THAT FOCUSED SOLELY ON IN-WATER SKILLS DEVELOPMENT INTO A SEQUENCED YOUTH MARINE EDUCATION AND RESEARCH MENTORSHIP PROGRAM FURTHER ALONG THE SAFE PROGRAM CONTINUUM.

Providing Additional Leadership Opportunities

Most survey respondents (96%) selected at least one hypothetical formal leadership or mentorship role that they would have considered applying for, even if it meant they would have additional responsibilities and would not be able to participate in other CMRS outreach activities. Only 4% of respondents indicated that they would not apply for any role.

Semester-long leadership or formal mentorship roles for study abroad students would also provide professional development and resume building opportunities. 16 free-responses of former students (approximately 22%)

specifically discussed wanting more responsibility and/or the potential of student leadership roles to benefit future students or South Caicos youth. In the words of respondent P14, “Adding leadership positions is SUCH a good idea. I wished I had more consistency in the kids and activities I was working with to build stronger relationships.” Respondent P71 echoed similar sentiments of the potential for leadership roles to improve consistency for local youth and build stronger relationships, stating, “I like the idea of long-term positions because I feel that this would allow students to create strong bonds with the local children which would help them adapt to the kids' needs, and therefore their own needs as well, in order to create the best experience possible.”.

The first come, first served program structure of signing up for youth outreach activities each Saturday was initially designed by CMRS to give study abroad students the opportunity to try as many activities as possible. Arguably, for South Caicos youth, this inconsistency in supervision is not a programmatic asset, especially when combined with the revolving door of study abroad students participating in youth outreach each semester. Our results indicate that inconsistent outreach roles may not best serve the needs of study abroad students either.

Discussion

Some youth outreach activities lead to more personal growth for the mentoring participant than others. This dataset allowed us to explore the relationship between serving as a mentor in SAFE skills-development mentorship program and the probability of personal growth of college students for different iterations of the program as compared to alternate outreach activities. Our findings suggest that structured mentor-based youth engagement not only has the potential to provide youth with consistent learning opportunities but is also beneficial to the clientele of study abroad organizations. This could be a triple-win — for study abroad organizations to stay competitive, the personal growth of college students, and the lasting impact of community outreach. However, additional research is needed to assess this final link: the extent to which local youth can benefit from a structured mentorship program with college students studying abroad for only a short period of time.

When pooling across outreach types, 74% of respondents agreed or strongly agreed with the statement, “Participation in this outreach activity significantly improved my study abroad experience or led to personal growth”.

Additionally, 44% of students factored in the ability to participate in outreach opportunities during their program selection process. These results suggest study abroad organizations that do not currently have community outreach programming should consider incorporating these programs regardless of structure type. Our modeling efforts suggest SAFE mentorship programs are an impactful way to do so.

Rising to Meet the Need for Structured Youth Outreach

Challenges to the implementation of structured youth outreach for study abroad programs include funding limitations and the need to ensure outreach programs consistently benefit the youth they are intended to serve. Mitigating the negative impacts that study abroad programs can have on host communities requires planning and substantial effort (Schroeder et al., 2009). In this context, study abroad organizations and their associated research stations are challenged to use their funding to ensure the happiness of their clientele while committing to community reciprocity in an equitable, long-term manner. Given limited resources, planning and maintaining skills-based youth development mentorship programs may appear outside the scope of study abroad programs whose main priority is the personal growth and skill development of their own students rather than of local youth. Here we contend that investing in thoughtful youth development programming benefits both. Skill-based youth development mentorship programs, theoretically better for youth based on the findings of after-school programmatic studies, are empirically better for study abroad clientele.

Study abroad organizations and their associated research stations are in a unique position to provide youth education opportunities, given their infrastructure, existing curriculum, and supply of college students who can serve as mentors. A quarter (25%) of the survey free responses called for more rigorous marine research curriculum for local youth. While we acknowledge that this would only be possible with additional program staffing, we suggest leadership roles for students may in part fill personnel needs, while simultaneously providing students with professional development opportunities.

The results of our survey showed that providing more SAFE, skills-based outreach activities to local youth positively benefited study abroad students. Further, in the case of CMRS students, students were eager for additional

participation opportunities and programming responsibilities themselves. For local youth, structured skills-based development programs (rather than goalless outreach activities) could help to offset the often unidirectional flow of non-material resources from local communities to study abroad organizations.

Envisioning Additional SAFE Programming in South Caicos

CMRS is well positioned to deepen the nature of their service activities. One method of doing so, as recommended by survey respondents, would be to create systematic programming for youth where local youth could graduate from participation as a mentee to the role of a mentor, and eventually become a college student themselves. In the words of one Fall 2015 respondent, “Having different levels of Snorkel Club could be cool so that as kids get more advanced they have different opportunities to look forward to” (P8). Taking this suggestion a step further, we can envision a CMRS pipeline program designed intentionally to follow the SAFE framework with explicit objectives of moving South Caicos youth from the position of being unable to swim to having interest in higher education or careers in resource management or ecotourism.

We propose a pipeline of five structured program levels that youth participants could advance through. Graduating to a new program level would come with increased responsibility and decision-making for the youth involved. Certificates of completion and built-in incentives for participation would be awarded for advancement to the next level of the pipeline. In this proposed pipeline, South Caicos youth would first gain foundational skills in marine education, swimming, and snorkeling through the *South Swimmers* program. Upon successful completion of the *South Swimmers* program, youth would then enter the next phase of the Ocean Outreach pipeline, the *Method Masters* phase, which is followed by the *Junior Researchers*, *South Scientists*, and *Ocean Leaders* programs.

Study abroad students could help to facilitate this pipeline through the creation of semester-long leadership roles under the supervision of a new staff position. We propose the addition of five student leadership roles—Ocean Research Mentor, Marine Educator, Snorkel Instructor, Swim Instructor, and Long-term Monitoring Project Leader—and a new staff position, the Ocean Outreach Coordinator (Figure 4).

We envision this pipeline of SAFE youth mentorship programming adapted for other study abroad programs to improve the experience and

personal growth of their study abroad clientele as well as the youth in their host community. Figure (4) below shows suggested additions to the current leadership and programmatic structure of outreach at CMRS to facilitate a SAFE Ocean Outreach youth mentorship program pipeline for South Caicos youth (A). Current staff positions appear in grey with arrows denoting chain of command. Suggested additional roles include a program coordination staff position (in yellow) and the creation of semester-long leadership roles for the SFS students (blue ovals). These leadership roles help facilitate sequential subprograms for youth participants (purple boxes). SFS students who did not want to participate could continue to sign up weekly for other unstructured outreach activities (B)

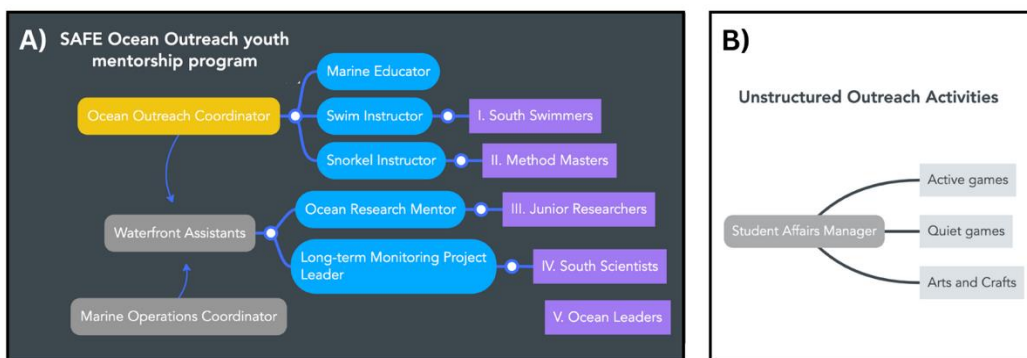


Figure (4): Suggested Additions to CMRS leadership and programmatic structure of outreach

Limitations and Future Research

We found that a structured mentor-mentee model for youth marine education is more effective at contributing to the personal growth and study abroad experience of college students than other types of youth outreach activities. However, we acknowledge the difficulty of disentangling the effect of time spent with the same local youth as compared to more SAFE programming. For example, Snorkel Club/Research Club involved more time spent in mentor-mentee pairs than unstructured activities. Therefore, more time in a mentor-mentee relationship itself (rather than more SAFE programming time) may be an underlying contributor to the elevated odds of perceived personal growth. However, the increased likelihood of perceived personal growth from Research Club as compared to Snorkel Club supports the hypothesis that greater SAFE programming elevates personal growth, rather than solely more time spent with the same youth participants.

Given the highly specialized nature of the SFS CMRS program, it is also possible that the surveyed CMRS students represents only a specific archetype

of study abroad students. Further research could determine how past experiences, beliefs and underlying values mediate perceptions of personal growth from mentoring. Further research is also needed to determine how perceived personal growth from SAFE mentoring opportunities abroad translates into long-term implications for study abroad students. For example, longitudinal studies can consider how different types of community engagement activities impact future career selection or participation in future service activities.

Beyond SAFE

Overall, our results align with other research evaluating the impacts of international service-learning on college students. Bringle et al. (2011) found that international service-learning allowed for content-based learning, including personal growth, critical thinking, self-awareness, problem-solving, and group decision-making. Service-learning abroad can also increase students' intercultural competence, appreciation of cultural differences, tolerance for ambiguity, and understanding of complex global problems (Kiely, 2004). However, as study abroad service-learning models become more popular, their design will have to be carefully constructed beyond SAFE framework tenets. Outreach activities, including those described in our case study, do not inherently promote justice or inclusivity. Without incorporating decolonizing pedagogies and cultural mentoring, service-learning activities may inadvertently entrench neocolonial ideologies and underlying assumptions of American superiority (Moreno, 2021). While systemic change to the study abroad agenda is needed, greater attention to issues of contextual, distributional, and procedural equity, could ensure service-learning activities redistribute some of the material and nonmaterial benefits of study abroad programs towards the communities that host them.

Conclusion

Our analysis of the perceived personal growth of college students participating in youth outreach provides evidence that serving as a mentor in SAFE skills-development programs benefits college students significantly more than participating in alternate outreach activities. In our case study, study abroad students were eager for additional youth outreach leadership and responsibility opportunities, suggesting student interest is not a limiting factor in advancing systematic youth outreach programming. SAFE programming has

potential to not only enrich the study abroad experience of college students through mentorship ties with local youth, but also improve access to education and resources for local youth in a committed, long-term manner.

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Appendix

For perceived personal growth for college students, the proportional odds (parallel regression) assumption met the criteria of the Brant Test (Brant, 1990). Average response of student by semester and activity on the five-point Likert scale to the question, "To what extent do you agree with the following statement, 'Participation in this outreach activity significantly improved my study abroad experience or led to personal growth'". "Strongly agree", "agree", "neither agree nor disagree", "disagree", and "strongly disagree" have been converted to the values of 5, 4, 3, 2, and 1 respectively.

	Dependent variable: <i>Perceived personal growth</i>		
	Value ± se	z value	p-value
Activity: Snorkel/Research Club	2.13 ± 0.61	3.48	< 0.001
Semester: Spring 2016	1.75 ± 0.61	2.87	0.004
Semester: Summer I/II 2016	2.61 ± 0.66	3.98	< 0.001
Agree Strongly agree	3.68 ± 0.63	5.83	< 0.001
Neither agree nor disagree Agree	0.60 ± 0.45	1.32	0.187
Disagree Neither agree nor disagree	-1.32 ± 0.53	-2.49	0.013
Strongly Disagree Disagree	-2.30 ± 0.76	-3.03	0.002

TABLE (A1): ORDERED LOGISTIC REGRESSION OF PERCEIVED PERSONAL GROWTH FOR COLLEGE STUDENTS

Semester	Response	Outreach activity	
		Snorkel Club/ Research Club	Any other activity
Fall 2015	Strongly Agree	18%	2%
	Agree	65%	33%
	Neither agree nor disagree	15%	43%
	Disagree	2%	12%
	Strongly disagree	1%	9%
Spring 2016	Strongly Agree	55%	13%
	Agree	41%	63%
	Neither agree nor disagree	3%	20%
	Disagree	0%	3%
	Strongly disagree	0%	2%
Summer 2016	Strongly Agree	74%	25%
	Agree	24%	63%
	Neither agree nor disagree	1%	10%
	Disagree	0%	1%
	Strongly disagree	0%	1%

TABLE (A2): ORDERED LOGISTIC MODEL PREDICTIONS OF THE PROBABILITY OF THE PERCEIVED PERSONAL GROWTH LEVEL OF COLLEGE STUDENTS BASED ON WHETHER STUDENTS PARTICIPATED IN A YOUTH MENTORSHIP PROGRAM FOR THEIR MOST COMMON YOUTH OUTREACH ACTIVITY

Activity	Semester		
	Fall 2015	Spring 2016	Summer 2016
Snorkel Club/ Research Club	3.8	4.5	5.0
Swim lessons	3.3	4.3	3.7
Active Games	3.0	4.0	3.4
Arts and Crafts	3.2	3.3	4.6
Quiet Games	3.7	3.6	4.5
Other	3.0	4.0	

TABLE (A3): AVERAGE RESPONSE OF STUDENT BY SEMESTER AND ACTIVITY ON THE 5 POINT LIKERT SCALE TO THE QUESTION, "TO WHAT EXTENT DO YOU AGREE WITH THE FOLLOWING STATEMENT, 'PARTICIPATION IN THIS OUTREACH ACTIVITY SIGNIFICANTLY IMPROVED MY STUDY ABROAD EXPERIENCE OR LED TO PERSONAL GROWTH'". "STRONGLY AGREE", "AGREE", "NEITHER AGREE NOR DISAGREE", "DISAGREE", AND "STRONGLY DISAGREE" HAVE BEEN CONVERTED TO THE VALUES OF 5, 4, 3, 2, 1 RESPECTIVELY.

Study abroad program	Advertised outreach activities available
SEA Education Association — <i>Caribbean Reef Expedition</i>	During the St. Croix Shore Component of the expedition fieldwork the organization itself works “intentionally with the local community and prior students” to learn “from our experiences and as an organization is committed to being good academic partners, travelers, and allies”. Community or youth outreach activities for students are not specifically mentioned ¹ .
International Studies Abroad — <i>Environmental Studies, Health Care, Liberal Arts & Spanish Language</i>	An optional service-learning program can be added to student itineraries. Specifically, students “may add on additional service weeks and earn additional academic credit”. During this time students will be paired with a partner organization ² .
Council on International Educational Exchange — <i>Liberal Arts Program in the Dominican Republic</i>	Volunteer opportunities offered weekly but not as a direct part of the program ³ .
Sea mester voyages	Ongoing outreach activities not specifically mentioned on their website, but “service projects in the past have included organizing class activities for local school children” ⁴ .

TABLE (A4): EXAMPLES OF OUTREACH ACTIVITIES OFFERED BY OTHER STUDY ABROAD PROGRAMS IN THE CARIBBEAN AS ADVERTISED ONLINE TO POTENTIAL STUDENTS.

¹ *Caribbean Reef Expedition*. Sea Education Association. (2023, January 30). <https://sea.edu/program-list/caribbean-reef-expedition-fall-2023/>

² *Environmental Studies, Health Care, Liberal Arts & Spanish Language - Study Abroad Program in San José, Costa Rica | ISA*. <https://www.studiesabroad.com/destinations/latin-america/costa-rica/san-jose/environmental-studies-health-care-liberal-arts-and-spanish-language>

³ CIEE Santiago de los Caballeros at CIEE. *Liberal Arts in Santiago de los caballeros Dominican Republic: College study abroad*. CIEE. <https://www.ciee.org/go-abroad/college-study-abroad/programs/dominican-republic/santiago-de-los-caballeros/liberal-arts>

⁴ *See the world from the deck of a sailing vessel - sea: Mester study abroad*. Seamester Study Abroad at Sea. (2019, September 24). <https://www.seamester.com/time-ashore/>

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