

The International Undergraduate Journal For Service-Learning, Leadership, and Social Change

Volume 9 | Issue 1

Article 3

November 2019

Service Learning in Developing Communities: Conducting Research in Mozambique and Belize

Mersady Redding
University of Arkansas

Kelsey Johnson
University of Arkansas

Follow this and additional works at: <https://opus.govst.edu/iujsl>



Part of the [Higher Education Commons](#), and the [Service Learning Commons](#)

Recommended Citation

Redding, Mersady and Johnson, Kelsey (2019) "Service Learning in Developing Communities: Conducting Research in Mozambique and Belize," *The International Undergraduate Journal For Service-Learning, Leadership, and Social Change*: Vol. 9: Iss. 1, p. 1-13.

Available at: <https://opus.govst.edu/iujsl/vol9/iss1/3>

This Article is brought to you for free and open access by OPUS Open Portal to University Scholarship, Governors State University, University Park, Illinois. It has been accepted for inclusion in The International Undergraduate Journal For Service-Learning, Leadership, and Social Change by an authorized editor of OPUS Open Portal to University Scholarship. For more information, please contact opus@govst.edu.

Service Learning in Developing Communities: Conducting Research in Mozambique and Belize

Introduction

The University of Arkansas is well-known for its frequently published research and study abroad opportunities (University of Arkansas). The University of Arkansas offers more than 1,000 study abroad programs each year (Graduate School & International Education: Students). The Bumpers College of Agricultural, Food, and Life Sciences is particularly noted for research studies in agriculture and study abroad programs in developing communities (Dale Bumpers College of AFLS: Research; Bumpers College International Programs Office: Programs). Studying abroad has become so accessible for driven students that it is now a common component of a degree within the college (Graduate School and International Education: Students; Bumpers College International Programs Office: Programs). Evidence suggests participating in one of these programs results in benefits including personal growth, intercultural competence, cognitive performance, and diversifying hands-on experience (Aguilar et al., 2018; Bumpers College International Programs Office: Why Go; Gordon & Mwavita, 2018; Harper, 2018; Hermond, 2018; Long, 2014; Newlon, 2018; “Study Abroad Aids Education”, 2018; Wooldridge, Peet, & Meyer, 2018).

Two prominent programs for Bumpers College students take place in Mozambique, Africa and Dangriga, Belize. Both encompass research and service learning in developing countries. Kelsey Johnson and Mersady Redding, two Animal Science students at the University of Arkansas, first developed their perception of studying abroad in Mozambique. The program in Mozambique was a Faculty-Led Community Development Program during the summer of 2016 (Bumpers College IPO - Community Development in Mozambique). In country, the students collaborated with a poultry farm titled Novos Horizontes, or New Horizons, to improve production and efficiency. The purpose of the poultry farm is not to profit the owner, but to profit the people of Mozambique, in the form of work, support, and resources (Novos Horizontes - Vision and Mission).

Mersady Redding graduates December 2019 from the University of Arkansas with dual majors in Pre-Professional Animal Science and Human Nutrition & Hospitality Innovation. She will then complete a MS in Human Nutrition and then apply medical school. She hopes to conduct health and nutrition research in developing countries and collaborate with international medical programs.

Kelsey Johnson graduated May 2019 from the University of Arkansas in Pre-Professional Animal Science and a Bachelor of Science in Agricultural, Food, and Life Sciences. She is now applying to medical school and plans on doing medical missions abroad in the future.

-1-

Journal for Service-Learning, Leadership, and Social Change Fall 2019

One benefit of the Mozambique program was access to faculty leaders throughout the entire program. These faculty leaders helped students understand the culture, integrate into the community, and collaborate with New Horizons and the local community. Johnson and Redding returned to the United States with a new understanding of poultry reproduction, nutrition, and health, but they ultimately returned with a new perception of their education and daily lives. They also gained a desire to travel and collaborate with developing communities in the future.

In 2017, Johnson and Redding spent eight weeks in Dangriga, Belize to conduct their undergraduate honors research. Johnson and Redding set out to determine the mammal species in Billy Barquedier National Park, in the Stann Creek district of Belize, but the canopy objective was to supply the park with information to apply for grants, advertise the unique tropical species, and increase a sustainable profit (Billy Barquedier). The eight-week service-learning program was a pilot program for the University of Arkansas (University of Arkansas: Special Projects with Peacework in Belize). It was the first-time students were sent to Belize to conduct undergraduate research without faculty. Business, Agriculture, Ecology and Honors College faculty and Peacework worked closely with Johnson and Redding to align them with a project that both suited their interests and would benefit the community. Once in country, the students were required to adapt to new circumstances and solve problems entirely on their own. Using game cameras and live traps, Johnson and Redding documented the mammal species in the park. When Johnson and Redding were not hiking or camping in the jungle to conduct research, they spent their time living in a house with four other University of Arkansas students. This was an opportunity to integrate more into the community of Dangriga. Johnson and Redding went to Belize to conduct research, but the service-learning experience challenged and influenced the students much more than the scientific knowledge they acquired.

Although Johnson and Redding's programs in Mozambique and Belize had similar research components and service-learning objectives, they resulted in two very different experiences.

Faculty-led Community Development: Mozambique, Africa Service-Learning Experience

Research and service-learning in a developing country has many aspects. The students learned that the experience was not about single handedly "helping" the people of Mozambique with the projects they bring from the United States. It is about facing obstacles and working with the locals as a team. Finding a solution teaches students how to fail and to be perseverant. Although the students prepared tremendously before arriving in country, the experiments did not go entirely as planned, and for the first time, even with massive planning efforts, the students had to accept failure. This was difficult. After Johnson's return to Arkansas, she stated:

-2-

Journal for Service-Learning, Leadership, and Social Change Fall 2019

The challenges I faced in Mozambique were difficult for me to handle at first because I was not accustomed to feeling as though I had failed. I put so much effort into being prepared for my project, but when I arrived I realized there were so many aspects of New Horizons that I had to experience in country in order to account for in my project. I remember when the first run of my experiment did not go well, I could have given up right at the first sign of trouble. That might have been my easiest option, but I did not want to let the people of New Horizons down. I lifted my head up, came up with a new plan, and tried again.

Many other students' projects also evolved during their time in Mozambique, which created a unique collaborative learning system between the Arkansas students and the Mozambican people. Service-learning in Mozambique began with the intention to share new ideas with a poultry farm and the developing community. Each year 20-30 students fly to Nampula to share their knowledge, and those students come home changed and stronger than when they left. The students have grown and developed skills while collaborating with New Horizons. The benefits of service-learning are evident in the continued and expanding relationship between New Horizons and the University of Arkansas.

Research Experience

Service-learning abroad and research have many obstacles that require problem-solving and determination. Much of the technology, tools, and resources in the United States are not available. The easiest solution that comes to mind is not the most applicable in these countries. In Nampula, Mozambique, poultry is a source of economic activity, a source of jobs, and a source of nutrient-dense food. Johnson and Redding focused on two of the factors that impact the industry: dehydration and vaccinations.

Johnson's research focus in Mozambique involved an experiment designed to alleviate chick dehydration during transport to out grower farms. Before Johnson set foot in Mozambique, she conducted preliminary experiments to ensure that this project benefited the New Horizons business and employees. Johnson created a concentrated gelatin product that the team could use to hydrate the chicks and ran a trial of her experiment at the University of Arkansas to determine the best concentration of gelatin. When the poultry team arrived and ran the first trial, the heat and other conditions proved that the concentration Johnson originally thought was going to work melted too quickly. The way she planned on administering the gelatin proved to be too difficult as well. The team had to recreate a more concentrated gelatin product and reconstruct the way

they fed the gelatin to the chicks. After overcoming those obstacles and running another trial, Johnson's final results revealed that her gelatin product significantly cut down the mortality rates of the chicks.

Redding's primary experiment examined vaccination protocol. The poultry team theorized that employees were not giving proper vaccinations to chicks, which can result in higher mortality rates from injuries and/or disease. The objective was to find a correlation between specific vaccinators and chick mortalities. The design of the study was altered significantly before a successful methodology was determined. The first obstacle during the experiment was labeling the chicks. The chicks ingested the water-soluble dye off of each other's feathers before it was able to dry. Permanent markers, the backup technique, were more resistant. An employee was then instructed to tally deaths of chicks for 3 days according to their labels. Unfortunately, the data was removed due to a collection issue. The data was a better indicator of error when Redding could collect data first-hand with a veterinarian. The veterinarian from the University of Arkansas performed necropsies, and one particular vaccinator had a significantly greater mortality rate caused by rough handling and improper vaccinations. After sharing the information with New Horizons, managers quickly moved the vaccinator away from the vaccinating table. An easy solution of changing allocation of hatchery tasks now decreases the chick mortality rates. The project was a success.

The students spent their last day with the New Horizons' Executive Board and all the people who helped them during the three weeks on the farm. They presented their original goals, the experiments they conducted, and the results they found. New Horizons planned to quickly integrate the solutions the poultry team recommended. The executive board predicted that the changes would have a significant impact on production and increase the farm's income.

Professional and Personal Impact

Johnson and Redding both left Mozambique with new outlooks on education, collaboration, and gratitude. The students have greater appreciation for education as United States citizens. Americans are privileged with the "right of education", while many people in Mozambique do not receive this advantage. The students now focus on truly learning the information that is presented in class to retain as much knowledge as possible. Their new goal is to learn information to make an impact. Knowledge and skills can be shared and passed on for generations.

-4-

Journal for Service-Learning, Leadership, and Social Change Fall 2019

Johnson:

When I first landed in Nampula and rode a bus to the hotel I was in shock from the extreme level of poverty I was witnessing. Children lined the streets in bare feet and tattered clothes. I had seen photos and videos of scenes like this on the internet and television, but once these screens were removed extreme emotions flooded me. As I was witnessing these scenes directly in front of me, I felt guilty for all of the material items that I own and obsess over. On that bus ride I wished I could gather all of my possessions and throw them out the window to all of the people who needed them more than I did. I shared my intense feeling of guilt with one of my faculty advisors. They told me that what I was feeling was natural, but the best thing I could do is share the knowledge that I have learned from my education with the people I meet in Nampula.

The experience I had at New Horizons taught me the true power of knowledge and collaboration. It is a powerful tool that can be used to solve many problems. Material items eventually fade but knowledge lives on forever. The knowledge I gained from my time in New Horizons lives on and continues to grow, and I hope that the knowledge I shared with the people of Nampula lives on within them as well.

I not only gained this educational knowledge, but a better outlook on life as well. I became a more positive person upon my return from Mozambique. I endured many setbacks during my journey there and was able to overcome them all with critical thinking and collaborating with the people in the community. Now when I catch myself complaining about little problems, I think of the smiling faces of the people in Mozambique and ask myself how I can look at my situation in a different light to solve the issue.

Redding:

I came back to the United States feeling accomplished, changed, and still somewhat covered in dirt and sweat. During my time in Mozambique, I grew intellectually and personally. One particular experience in Mozambique remains fresh and clear in my mind: The Nampula market. Vendors followed us around and begged us in Portuguese to make a purchase. I knew they just hoped to bring food home to their family that day. I saw children playing soccer with a rolled up wad of duct tape. I pulled a ball from my bag and placed it in a little boy's hands. My hope was for the children to all play with the ball. I did not expect the consequences of my action: Anxiety swept over our group as we were engulfed by thirty children crying for more toys, and little hands grabbed at our arms. The army of children followed us all the way to the gates of our hotel. I realized for each person I thought I could help, there were thousands more in the same gut-wrenching situation.

That was when I decided I could not really help them by handing out physical objects or even a million dollars; I needed to collaborate with them to find sustainable, long-term solutions.

I may have had irregular bowel movements and ratted, dirty hair for weeks and almost lost my eyes from an infection, but I would do it all again with a smile on my face. The people of Mozambique have the brightest joyful smiles because they live off of their family and their faith. Many Americans are blessed with their basic needs but they don't realize how valuable these basic necessities are and continue to crave more. When I feel like I have failed or like I have a right to more opportunity or material things, I will remember that I have family and I have faith. I will smile like a Mozambican and cherish the life I have been blessed with. Mozambique has made me a more driven, open-minded, and humble human being, and for that I am forever thankful.

Special Community Development Research Projects: Belize Service-Learning Experience

When Johnson and Redding returned from Mozambique, one of the Mozambique advisers, Dr. Amy Farmer, presented them with the opportunity to conduct their undergraduate honors thesis research in Belize. Both students were excited and anxious to experience service-learning in a developing country again. At the same time, the University of Arkansas Honors College piloted a program that provides grants for undergraduate thesis research in one of three places abroad. Fortunately, Belize is one of these sites. In Belize, students work with the community to complete beneficial research without faculty on-site, all while living together in Dangriga and integrating into the town for eight weeks.

Johnson and Redding collaborated with Billy Barquedier National Park and Peacework to decide on a project. Following consultation, they worked with University of Arkansas faculty to develop a research protocol and to anticipate onsite obstacles. "Peacework is a global nonprofit organization that engages communities, academic institutions, and corporations in innovative cross-sector solutions for sustainable development around the world and across seven developmental disciplines" including agriculture (About Peacework). Billy Barquedier National Park strives to conserve its wildlife, and successful conservation requires an understanding of the biodiversity within its boundaries. The park asked Johnson and Redding to collect data on mammal species because there is very little research completed for that taxonomic group, and mammals are a significant attraction for ecotourists. The rangers of the park possessed specialized knowledge about the park and the wildlife within it but did not have the equipment necessary to properly document the animals.

In addition to conservation, another underlying objective was to increase Billy Barquedier National Park's success and provide a sustainable means for economic growth. Billy Barquedier National Park is not found on top tourist attraction lists and very few people visit the small village where the park resides. Poverty is high, and job opportunity is low. Johnson and Redding hoped to unveil the beauty of the wildlife within Billy Barquedier National Park. The park could then utilize the information to apply for grants and for better advertisement. If Billy Barquedier National Park received additional support from government agencies and the public, the park would have increased income and could offer more jobs. The pictures and data collected in this study was given to the overseers of Billy Barquedier National Park (STACA) and has been used in reports about the park and to apply for funding for further biodiversity research within the park.

Johnson and Redding's guides played a significant role in the students' experiences. Peter, Fidel, and Mark were very experienced in the jungle and kept the students safe, but they also contributed a lot to the success of the project with great insight about the animals they had seen and where the students could potentially document them. Johnson and Redding learned from their guides and their guides learned from them. Together, the students and park guides made an excellent team in documenting the terrestrial mammal biodiversity within the park.

As mentioned, when Johnson and Redding were not in the jungle, they lived with three other University of Arkansas students in Dangriga. The program allowed for complete integration into the community. Redding explained:

I do not feel I just 'studied abroad' in Belize: I lived there. For eight weeks, I ate local cuisine and cooked in my own kitchen. I walked every road in the town and navigated all across Belize on public buses. I built relationships with the other University of Arkansas students, but, more importantly, I built friendships with the people of Dangriga. Dangriga is more than a place where I studied abroad and conducted research. Dangriga will forever be my sweet little Belizean home.

In order to receive the full benefits of service-learning in a developing country, students must communicate with and understand the people they are working for and collaborating with. The greatest impact, according to Johnson and Redding, was not the process of completing a project, but the relationships with community members that grew close to their hearts. Service learning provides purpose beyond the tangible final product.

-7-

Journal for Service-Learning, Leadership, and Social Change Fall 2019

Research Experience

Johnson and Redding's study surveyed the mammal species in Billy Barquedier National Park with live traps and game cameras. The idea of their trip seemed simple: bait the traps, set up the cameras, and document the species. However, conducting research is challenging, especially in an unfamiliar developing country.

Johnson's study took place within Zone 1 of the Billy Barquedier National Park. Zone 1 was the recreational portion of the park according to the park's management plan. Johnson expected to observe less species within this area of the park because some species may be scared away due to frequent human activity. For this study, Johnson and Redding woke up at 5:30 a.m. and caught a bus out to the entrance of the waterfall trail in Billy Barquedier. There, they met their guides Peter, Fidel, and Mark. They hiked for three to five hours, moving cameras and traps around on the trails.

Redding's study area was located in Zone 4. In contrast to Johnson's area, Zone 4 was a highly protected area deep within the jungle. Due to its seclusion from human activity, Johnson and Redding expected more species in this area. The students hiked four miles up mountains with their guides in order to reach the area where Redding conducted her research. The group stayed at a campsite in Zone 4 for two to three nights at a time, setting and checking traps and cameras during the day. When the sun went down, they spent time night-hiking to see nocturnal animals or told stories by the campfire.

Before arriving in Belize, Johnson and Redding drew out a very detailed plan of how they were going to carry out their projects, but when they arrived in country the plan changed. The mammals in the jungle were not the same as animals in Arkansas. At first, Johnson and Redding followed the methods explained in the literature they read prior to their arrival, but over a week passed, and no mammals entered the traps. Johnson and Redding would have spent weeks with no success if it were not for their guides. The Billy Barquedier National Park guides suggested that Johnson and Redding use banana peel or local fruits to bait the traps and cameras. They also helped the students select the best areas to set traps and cameras. Johnson and Redding were there to document the animals in the park, but the guides knew much more about those animals than the two young researchers.

In order to see the animals of Belize beyond a game camera lens, Johnson and Redding had the opportunity to work with the CELA study abroad program that was stationed at the Belize Zoo. (Celabelize.com) They were able to go behind the scenes (even in the employee only facilities)

and see how the animals received food, care, and veterinary treatments. The veterinarian that lead the program, as well as his colleagues, helped the girls analyze pictures from their game cameras and identify species.

After Johnson and Redding carried out their projects, they came to realize that some of their hypotheses were true, but other inferences they made about the neotropical animals were incorrect. Both study areas surpassed the estimated species count. The results were rewarding and insightful. Johnson and Redding caught a smaller number of species from trapping than expected, but the game cameras prevailed. Some of the most exciting pictures from the game cameras were of a puma, an ocelot, a margay, a Black Howler Monkey, and a tapir. All of these species are endangered or threatened, and the tapir is Belize's national animal.

Professional and Personal Impact

Kelsey Johnson:

After researching, reading, and nailing down my thesis research idea I knew that I needed to prepare as much as I could, but also be flexible when I arrived in country because my project would most likely require drastic changes due to the environment.

The entire trip was both physically and mentally challenging, which in turn made me a stronger person. During the hikes there were many times that I wanted to quit because I was exhausted, but I persevered because I saw the strength in our guides and was inspired to continue on. Also, our low live-trapping success was discouraging, but in the end, it taught me how to be patient with research and strengthened my problem-solving skills. These hardships paid off with all of the quality data, memories, friendships and incredible life lessons I learned along the way.

Some of my favorite memories are sitting down next to our campfire with our jungle guides. Sometimes we would look through our neotropical species books together and they would tell us everything they knew about each animal from experience and we would explain what we have read about them. Other times we would relax and forget about our work by sharing personal stories about our lives and laughing together under the jungle stars.

A good friend of mine that I met in Dangriga was a sweet lady named Tanisha who I enjoyed calling Mama Bear. Eating Tanisha's traditional home cooked meals immersed me in the true culture of Belize, and her warm personality made me feel right at home. After a long day in the jungle as I sat down and ate with Tanisha, I came to notice that Belize moves at a relaxed pace. This realization taught me that sometimes I get too caught up in the next task I have at hand, when I should be enjoying my life in present time.

Mersady Redding:

Conducting my honors thesis research without the tools, the resources, or the faculty I have at the University of Arkansas was intimidating: What if it all fell apart? Plans do not always work out the way they are envisioned. Even after 7 weeks of catching nothing but a lizard, I reset traps every time I went in the jungle with the hope that I would catch something. I adapted to the circumstances, tried new things, and never gave up hope. On the last day, I opened the trap and squealed with delight. No one had ever been happier to catch a mouse. If everything came easy, no one would jump up and down at the sight of success, or a mouse in my case. My traps were not efficient. However, game cameras, first-person sightings, and prints in the soil exceeded my “guestimation” of species by a long shot.

Although I was focused on conducting research, my experience turned out to be much more: It was the adventure of a lifetime. I never thought I would find myself hiking through mountains of the Neotropical Rainforest. I remember arguing with myself in my head with every step on whether or not to stop. I took a deep breath in through my nose and exhaled slowly out my mouth: I counted the steady, slow breaths until I reached ten. I must have counted to ten 1,000 times a day for two months. I continued striding up the mountains as vines and giant ferns slapped my arms and legs and tried to pull me back. I learned a new level of determination and perseverance.

When I laid awake in my hammock and heard howler monkeys and kinkajous in the distance, I thought a lot about the significance my experience would have on the rest of my life. I unveiled magnitudes of strength and character. Kelsey and I managed to laugh when we stood at a flooded river: our only way out of the jungle. We gave each other encouragement when we were tired and wanted to lay down on the ground. We had hope when our SD cards, phones, or computers crashed and our data may have been lost. I know now anything is possible when I set my mind to it.

As I face obstacles, huge mountains, in my life, I will remember that there are multiple paths to success and some are long and steep. I will take a deep breath in, slowly let it out, and put one foot in front of the other until I reach my destination.

Conclusions

The University of Arkansas provides students with life changing experiences. The study abroad programs in Mozambique and Belize challenged Johnson and Redding to develop both professionally and personally in a way that a classroom setting could never achieve. Developing countries provide an optimum service-learning experience. Service learning, coupled with

research, allowed the students to explore ways to collaborate with local people in order to solve problems. They learned that these problems would be solved differently in the United States, but in developing countries they do not always have the resources available for a quick fix. Johnson and Redding learned to think critically: They utilized the knowledge they acquired in the United States and sources in the developing communities to find a solution. These are skills that will help the students in their future careers and lives as a whole. The valuable knowledge they received during their journey, in addition to the priceless memories they shared along the way, resulted in experiences that will be cherished forever.

Acknowledgements

KJ and MR collaborated with Peacework, Dr. Jennie Popp, Dr. Amy Farmer, Chelsea Hodge, Dr. Kimberly Smith, Dr. Jacques Hill, Dr. Jason Apple, Dr. J.D. Willson, Dr. Charles Rosenkrans, Dr. Lawton Lanier Nalley, Dr. Fred Dustan Clark, and Isabel Whitehead. In Belize, KJ and MR worked alongside Peter White, Mark Faux, Fidel Brooks, Anthony Hislop, and STACA. The girls would like to thank Tanisha Cacho for her personal guidance in Belize. Projects were funded by the University of Arkansas Honors College and the Bumpers College International Programs Office (IPO). This article was written in memory of Dr. Kimberly Gray Smith: He served as an influential advisor and committee member for both KJ and MR and passed away on April 9, 2018.

Works Cited

Academic Engagement. (n.d.). Retrieved from

<http://www.peacework.org/academic.php#/academic.php>

Aguilar, S., Ausley, F., Barrios, Y., Cardillo, C., Harrington, L., Koester, A., ...

Tomazin, H. (2018). The Impact of Studying Abroad for UF Undergraduate Nursing Students. *Florida Nurse*, 66(4), 8. Retrieved from <http://0-search.ebscohost.com.library.uark.edu/login.aspx?direct=true&db=a9h&AN=133429858&site=ehost-live&scope=site>

Billy Barquedier. (n.d.). Retrieved from

<https://billybarquedier.org/where-we-work/billy-barquedier/>

Bumpers College International Programs Office - Community Development in Mozambique. (n.d.). Retrieved from

<https://bumpersinternational.uark.edu/programs/faculty-led/mozambique.php>

-11-

Journal for Service-Learning, Leadership, and Social Change Fall 2019

Bumpers College International Programs Office: Programs. (n.d.). Retrieved from <https://bumpersinternational.uark.edu/programs/index.php>

Bumpers College International Programs Office: Why Go. (n.d.). Retrieved from <https://bumpersinternational.uark.edu/about/why-go.php>

Dale Bumpers College of Agricultural, Food and Life Sciences: Research. (n.d.). Retrieved from <https://bumperscollege.uark.edu/research/index.php>
Graduate School and International Education Study Abroad & International Exchange: Students. (n.d.). Retrieved from <https://studyabroad.uark.edu/students/>

Gordon, S. R., & Mwavita, M. (2018). Evaluating the international dimension in an undergraduate curriculum by assessing students' intercultural sensitivity. *Studies in Educational Evaluation*, 59, 76–83.
<https://0-doi-org.library.uark.edu/10.1016/j.stueduc.2018.03.005>

Harper, N. J. (2018). Locating Self in Place During a Study Abroad Experience: Emerging Adults, Global Awareness, and the Andes. *Journal of Experiential Education*, 41(3), 295–311.
<https://0-doi-org.library.uark.edu/10.1177/1053825918761995>

Hermond, D., Vairez Jr., M. R., & Tanner, T. (2018). Enhancing the cultural competency of prospective leaders via a study abroad experience. *Administrative Issues Journal: Education, Practice & Research*, 8(1), 18–27.
<https://0-doi-org.library.uark.edu/10.5929/2018.8.1.4>

Honors College. (n.d.). Retrieved from <https://honorscollege.uark.edu/>

Newlon, K. A. (2018). 468 Quantity and Quality: Education Abroad for Animal Science Majors. *Journal of Animal Science*, 96, 251.
<https://0-doi-org.library.uark.edu/10.1093/jas/sky073.465>

Long, T. (2014). Influence of International Service-Learning on Nursing Student Self-Efficacy Toward Cultural Competence. *Journal of Nursing Education*, 53(8), 474–478. doi:10.3928/01484834-20140725-02

Novos Horizontes, D. W. (n.d.). History. Retrieved from <https://www.novoshorizontes.net/new-horizons-history>

Novos Horizontes, D. W. (n.d.). Vision and mission. Retrieved from <https://www.novoshorizontes.net/vision-and-mission>

Study Abroad Aids Education. (2018). *BizEd*, 17(3), 14–16. Retrieved from <http://0-search.ebscohost.com.library.uark.edu/login.aspx?direct=true&db=a9h&AN=129489357&site=ehost-live&scope=site>

University of Arkansas: Special Projects with Peacework in Belize. (n.d.). Retrieved from https://hogsabroad.uark.edu/index.cfm?FuseAction=programs.ViewProgram&Program_ID=12056

University of Arkansas. (n.d.). Retrieved from <https://www.uark.edu/>

Wooldridge, D. G., Peet, S., & Meyer, L. L. (2018). Transforming Professionals through Short-Term Study-Abroad Experiences. *Delta Kappa Gamma Bulletin*, 84(4), 31–36. Retrieved from <http://0-search.ebscohost.com.library.uark.edu/login.aspx?direct=true&db=a9h&AN=131118263&site=ehost-live&scope=site>