

PEACE CORPS COVERDELL FELLOWS

2017-18

| | | | |
|-----------|----------------|----------|--------------|
| JENNA | ALTHERR FLORES | BREANNE | LOTT |
| ELIZABETH | ANDERSON | MICHAEL | MANSFIELD |
| ALLIE | ARMSTRONG | CASEY | MCKAUGHAN |
| JOEL | ATWOOD | CAITLIN | MEYER KRAUSE |
| LISA | BALLAND | JEREMY | MILLER |
| CHARLES | BRANDS | JENNIFER | MOSCATO |
| CORINNA | BROWER | JOE | NAVELSKI |
| ELIZABETH | CAPACI | MARIO | NUÑO-WHELAN |
| TARA | CARMODY | STEPHEN | OLIVER |
| DAMETREEA | CARR | EMILY | PALESE |
| FOREST | CARTER | KATEY | REDMOND |
| MALLORY | CLEVINGER | NATALIE | REYES |
| SARAH | CRETCHER | NICHOLAS | ROLIG |
| ALISON | ELDER | SHAYNA | ROSENBLUM |
| CONOR | FITZGERALD | ANDREA | SHELTON |
| BRITTANY | FRANCK | RYAN | SHORTAL |
| SUMAYA | FRICK | RUBEN | SOLIZ |
| KRISTINE | FRIESEN | JOE | STEWART |
| ANNALISE | GARDELLA | LYNN | TCHIDA |
| LAUREN | HARVEY | LINDSEY | THATCHER |
| DIONNA | HATCH | MARK | TIBBETTS |
| CHARISSE | IGLESIAS | JUANITA | TREJO |
| REBECCA | JOHNSTONE | MARIO | TREJO |
| BRAD | KINDLER | KATHRYN | TUCKER |
| KEEGAN | KRAUSE | KELLI | WILLIAMS |
| ANDREW | LOBO | RYAN | YOUNG |

Community and Academic Engagement
by UA Peace Corps Coverdell Fellows

INFLUENCE, INNOVATION, AND IMPACT

Community Outreach & Research Showcase



March 23, 2018 • 4:00-6:00 PM



UNIVERSITY OF ARIZONA
Graduate College
Peace Corps Coverdell Fellows



Peace Corps

PEACE CORPS COVERDELL FELLOWS

Community Outreach and Research Showcase

Sonora Room, Student Union
University of Arizona

| | |
|----------------|----------------|
| Registration | 3:45 pm |
| Welcome | 4:00 - 4:05 pm |
| Poster Session | 4:05 - 6:00 pm |
| Awards | 5:45 - 6:00 pm |

* * * * *

Awardees will be notified by email.

Refreshments available from 4:00 to 6:00 pm

NOTES

ABSTRACTS

Jenna A. Altherr Flores

What Does It All Mean? Messages to People from Refugee Backgrounds in the Local Tucson Community

Refugee-background L2 adult emergent readers who have been resettled in highly literate societies like the U.S. must learn how to navigate the written and visual text-laden environment of their country of resettlement, while also becoming literate, learning a second language, and learning how to read and utilize texts. Previous research on L2 adult emergent readers has examined many social and psycholinguistic aspects of literacy development, but has not considered the semiotic landscape and its role in mediating L2 literacy. This research utilized a geosemiotic approach to study two spheres of the semiotic landscape in a large, southwestern U.S. border town. The research questions were: 1) What languages and scripts are used, and in which institutions?, 2) Where are signs placed in each institution?, and 3) What elements of multimodality and visual literacy are used, and in which institutions? Data was collected by digital photograph at two refugee resettlement agencies, and two community adult education centers. Data was analyzed according to the geosemiotic framework of visual semiotics and place semiotics. It was categorized by language and script, material placement, and visual semiotic elements, and thematically analyzed. The study provided a thick view of the multilingual environment and multimodal (geo)semiotic landscape in two spheres of this border town. Findings revealed assumptions of (visual) literacy and Western cultural and social semiotic norms, a monolingual or ecological language bias, and ideologies of deficit. The study's results can impact how institutions present information to refugee-background L2 adult emergent readers, and the types of messages that are presented; the results can also inform language and literacy pedagogical practices for this population.

Joel Atwood

Using Neutrons as a Rain Gage: Method for Square Hectometer Average Rainfall Estimation

Passive cosmic ray neutron detectors are an emerging technology that has recently been applied to estimate average soil moisture on the square hectometer scale. In this study we calibrate these same detectors to derive averaged rainfall over the detection footprint. This would fill a void of needed data between point measurements with rain gages and tens of kilometer scale averages using satellite data. We apply a mass balance approach to derive a calibration curve using a control volume that is non-linearly dependent on the average soil moisture. With our method we can accurately estimate rainfall after parameter fitting and applying a novel way to estimate the drainage from the control volume. We apply this approach to several field locations and discuss limits of our method and possible improvements.

Elizabeth Anderson

Preparing for Zika: Health disparities, gender, race, & poverty in Fortaleza, Brazil

This project sought to assess community perceptions of the various social factors leading to health disparities in Fortaleza, particularly for women at high risk for contracting Zika at the height of the epidemic. The project included a quantitative assessment to lay the groundwork for improving health care seeking behavior and health care knowledge for individuals in the community, particularly in regards to reproductive health. A small NGO, Grupo de Desenvolvimento Familiar (GDEFAM), played an instrumental role in designing and implementing the survey tool used to collect information on participants' knowledge of the risks associated with Zika and their own perceptions of access to health resources. The 17-question survey included both items with quantitative responses and open-ended questions that allowed participants to share personal and anecdotal responses. Respondents (n=37) felt personal responsibility for preventing the spread of the virus, consistent with the focus of local and national Zika campaigns. Respondents stated that birth control was freely prescribed and refilled at public clinics, but appointments with prescribers took an average of four months to realize. Respondents indicated an overall disconnect between public health efforts and women's perceptions of the options available to them, particularly concerning microcephaly in infants. This project highlighted research areas and questions for larger-scale projects associated with the social determinants of Zika transmission and expression. The future of effective public health interventions for Brazil lies in capacity building for at-risk populations, rather than vertical efforts to treat and control infectious diseases after they reach epidemic proportions.

Lisa Balland

The Process Over Product Approach: How the Journey of Learning Empowers Refugee Youth

The Owl & Panther Project seeks to provide meaningful and healing expressive arts experiences in the community and the natural world for refugee families resettled in Tucson who have been impacted by trauma, torture and traumatic displacement. One of the key tenets of this work is adhering to the 'process over product' approach to learning. This poster will examine this educational approach and how it connects to strong mentorship, full creative engagement, and works at a learner-driven pace. The poster will come full circle to connect process over product into public health and prevention programming - and how the process, in fact, becomes the product, to improve individual health outcomes.

Charles Brands

Empowering Youth Through the Bicycle

This poster discusses how the non-profit El Grupo grew to incorporate children from refugee backgrounds into their afterschool/weekend biking curriculum. El Grupo has come to help these children adjust to their new life in America through team comradery and alternative sports. It discusses how these children now have an opportunity to learn life skills through access to healthy sports activities that may not have been accessible due to multiple socio-economic barriers specific to refugee populations.

Elizabeth Capaci

Arizona AIDS Education and Training Center - HIV/AIDS Trainings in Native American Communities

The Arizona AIDS Education and Training Center is located in the University of Arizona's College of Medicine. The mission of AETC is to "provide healthcare professionals with the knowledge and skills necessary to provide outstanding care to people living with HIV and AIDS" with the goal of providing education and training opportunities to clinicians, physicians, nurses, pharmacists, and mental health workers with HIV patients to increase aptitude and understanding of the management and treatment of HIV. The goal of the Arizona AIDS Education and Training Center is to provide and address HIV training needs to all populations and health care facilities that have HIV patients in order to create informed and competent health professionals in the field of HIV care and management. My main responsibilities have been coordinating HIV trainings with health care professionals in Native American health centers that request specific trainings from the AETC. Before the trainings, I assist in the creation of objectives and presentation materials for the trainings as well as participating in the presentations. After the completion of trainings and preceptorships, I also assist with data submission of training program and participant information evaluations to the regional AETC database. I have also prepared a presentation on the Arizona AETC, worldwide and Arizona specific HIV epidemiology, and general HIV pathology and presented the data to fellow Peace Corps Fellows here at the University of Arizona. In addition, I provide general support to the AETC program director including assisting in the development of materials for additional trainings and learning aids for participants. Outcomes and skills learned during my time with the Arizona AETC include the ability to adapt resources to specific community needs and goals, knowledge to conduct informational interviews to assess knowledge gaps and informational requests and transform them into tangible training goals and objectives, logistics associated with planning and coordinating HIV and other trainings, and the role organizations such as the Arizona AETC in community outreach and development via public health.

Tara Carmody

At-Risk Youth Engagement through Academic Support and Relationship Building

Upon receiving the Peace Corps Paul D. Coverdell Fellows Graduate Assistantship, I spent the 2017-2018 academic year enhancing Academic Services and developing volunteer programming for the Workforce Development Department at Goodwill Industries of Southern Arizona. My position through this fellowship, which is primarily focused on addressing the growing concern for disconnected youth, ages 14 to 24, who are not enrolled in school and are unemployed, strongly connected with Goodwill's mission to, "provide services, training and jobs to people with barriers to employment." As part of the fellowship, I have been working to improve academic gains and achievement, so that we can serve a larger number of disconnected youth through Goodwill. Our goal is to help them not only obtain their GED, but also explore and enroll in post-secondary education options. Additionally, I have been working to expand the volunteer programming at Goodwill so we can connect our youth to the community and in return, engage the community with our youth. Due to this new programming youth have the opportunity to connect with university students and dedicated community members who volunteer as tutors, mentors, and interns.

Dametreea Carr

Zika, Zoonoses, and the ZOO-Crew: Effective Public Health Messaging among Diverse Populations

Arizona residents have a risk of acquiring Zika virus due to frequent international travel and close proximity to Mexico. This very dangerous mosquito-borne virus is just one of many zoonotic diseases that can spread from animals/vectors to humans. To increase awareness of zoonotic diseases, Arizona Department of Health Services (ADHS) began a Zika awareness campaign and developed a zoonotic diseases activity book to assist with health communications among children, public health professionals, and the general public. Key goals were to disseminate important public health messages and increase awareness of zoonotic disease prevention. Goals were met using two methods: (1) development and dissemination of a Zika virus questionnaire, and (2) development and dissemination of a zoonotic diseases activity book. The questionnaire was administered to public health professionals and the downtown Phoenix community. The activity book was shared with local children at various community events in Phoenix, AZ. Overall, results indicate that ADHS's Zika campaign was considered $\geq 50\%$ effective by all participants. Individual comments, however, state that the ads were "creepy" and did not effectively increase awareness of critical public health facts relating to risk groups for Zika virus. Results from these projects will be used by ADHS to improve and direct future campaigns and educational material.

Forest Carter

Using Aerial Photography to map the Saguaro Cactus in Saguaro National Park

Efforts to map the saguaro cactus (*Carnegiea gigantea*) began in the early 20th century and have been undertaken at various scales using a range of methods. Saguaro National Park (SNP) has expressed interest in mapping saguaros at a larger scale than is feasible using traditional field surveys. High resolution aerial photography presents an opportunity to map saguaros efficiently over large areas. Although individual saguaros cannot be directly detected from existing high-resolution aerial photography, the shadows cast by saguaros provide a useful proxy for identification of saguaro locations. We determined that saguaros at least 1.5 meters tall could be reliably identified by the shadow signature. We developed and implemented a Python script for automatically scanning aerial photographs for saguaro shadow signatures and marking them with point locations. We scanned 144 square miles of SNP and found 450,000 shadow signatures. SNP provided saguaro location data in eleven small plots that had been surveyed in the field, which were used for validation. The methods developed in this research are intended to be useful for efficiently detecting saguaros in high resolution aerial photography. This methodology will enable natural resource managers and other researchers to easily scan aerial imagery of large areas for saguaros shadow signatures. Although not as accurate as in situ field measurements, this method can produce new results each time new imagery is taken without requiring extensive labor and financial cost.

Sarah Cretcher

Helping Late-Talking Toddlers Communicate: A Case Study

This case study follows the progress of a language-delayed toddler who participated in an early intervention study of input-based targeted vocabulary acquisition. This toddler did not respond to initial treatment, and largely communicated via gestures, without meaningful use of words. As a result, a secondary, trial therapy was implemented using an Alternative and Augmentative Communication (AAC) device, which allows people to communicate without talking. Within four AAC sessions, this toddler's use of spoken words significantly increased compared to negligible progress across sixteen sessions with the input-based protocol. This child's success demonstrates the occasional need for therapy that teaches the concept of meaningful word production. Use of an AAC device offers a treatment option to teach this concept to children who do not respond to other evidence-based early intervention language services.

Alison Elder

Green Infrastructure Access in Tucson, AZ

The multi-benefits of Green Infrastructure (GI) evidence the importance of access to government GI programs for all segments of society. However, access to up-front cash for rebate programs is a hardship for many low-income families. Research indicates that low-income groups in Tucson have limited access to government GI programs. In recent years, local policymakers and NGOs have been working together to modify existing GI programs for greater inclusivity of the entire community, creating a low-income Rainwater Harvesting grant and loan program. For my Peace Corps Coverdell Fellowship Outreach Assistantship I work with a team of physical and social scientists on a National Science Foundation Dynamics of Coupled Natural and Human Systems project, "Sustainable Water for Arid Communities." My role in this project is working on a case study of GI implementation in Tucson. This poster focuses on the City of Tucson Rainwater Harvesting Incentives Rebate Program which offers rebates for the installation of rainwater harvesting systems to qualifying project applications. The rebate program funds both Active and Passive Rainwater Harvesting Systems. Passive Rainwater Harvesting Systems are generally less expensive than Active Systems, but, to date, the majority of rebates have been for Active Systems. This disparity may be due to the larger dollar amount offered for Active System rebates, to the administrative ease of Active Systems which are more straightforward to install, or because of the strong association of Rainwater Harvesting with cisterns. My research focuses on the equitable distribution of government GI programs in Tucson.

Brittany Franck

Women's (Re)Productive Injuries in Ethiopia: Labor and Women's Bodies

Obstetric fistula is a childbirth injury which affects 2-3.5 million women and girls in developing countries. It has been called the "signature wound of maternal health" (Morrison and Casper 2012), because it illustrates how the global and local inequalities that women face, especially in reproduction, harm their health and threaten their lives. While many studies of obstetric fistula have shown the tremendous suffering women face in the immediate aftermath of their injury and have described their treatment experience, few have remained to see the long-term effects and disabilities of the injury emerge. Even fewer researchers have asked how fistula might be a lens for understanding women's experiences of different morbidities over their life course, fertility and non-fertility related. Since most studies have been clinic-based, they have also failed to understand how the context of women's lives and the hardships they face might influence their experience of reproductive morbidity across the lifespan. And, in focusing on women's reproductive roles only, researchers have not asked how women's other roles in households shape, and are shaped by, their reproductive health.

Continued...

The proposed one-year ethnographic study will focus on three reproductive disruptions: obstetric fistula, uterine prolapse, and urinary incontinence. The research will aim to illuminate how women in Ethiopia, living in a context of chronic uncertainty and hardship, experience reproductive disruptions over their life course, and what their experience suggests about the relationship between their reproductive and productive trajectories.

Sumaya Frick

Macro Education Policy: A Wicked Problem

This quantitative research explores the outcomes of the perceptions, and complex relationships between, national, regional, and international education policy stakeholders. That complexity stimulates divergent discourses and policy acts for education, creating a Wicked Problem (Rittel & Webber, 1973). Through education typologies, the contributive value of human capital is described as managerial or non-managerial labor. Those typologies are separately tracked academic or vocational education. As class constructs, they in turn define and limit human capital contributions to national economic strength. The consequence of that construct is significant for regional, national, and local level education stakeholders. For them, binary definitions of human capital are not reflective of contextual need or potential, while conformity to them risks global market isolation and poverty. Panel regression findings from 14 years of world economic, vocational and academic enrollment data reveal that academic education alone has no impact on GDP's, but academic accompanying Technical Vocational Education Training (TVET) does powerfully. Findings also reveal that every TVET enrollment proportionately increases academic enrollments, but not the inverse. Adoption of academic only investment increases poverty, negatively affecting GDP growth. Longitudinal findings indicate that unlike high-income countries, middle-income countries including the Caribbean states, enacted efforts to increase GDP's by supporting academic and TVET programs. As measures of development and sustainability, they also serve to secure a role within the new economics of globalization. The findings also point to further qualitative research to determine how policy actors navigate this Wicked Problem.

Annalise Gardella

Peace Corps Recruitment: Inspiring Global Thinking in University of Arizona Undergraduates

The US Peace Corps formed in 1961 under President John F. Kennedy to promote world peace and friendship with three goals: to help the people of interested countries in meeting their need for trained men and women, to help promote a better understanding of Americans on the part of the peoples served, and to help promote a better understanding of other peoples on the part of Americans. As a land grant institution, the UA has parallel goals and a long history with Peace Corps recruitment, sending diverse and qualified volunteers to serve and bringing Returned Peace Corps Volunteers back to the university as graduate students in the Paul D. Coverdell Fellowship program and then as educators, faculty, and university staff. Through the Coverdell Fellowship program, since 2000, 356 Returned Peace Corps Volunteers have provided close to 400,000 hours of applied service work to the Tucson community. This year, the Peace Corps announced that, with 43 Wildcats currently serving abroad, the UA is ranked Number 20 among large schools in the agency's 2018 Top Volunteer-Producing Colleges and Universities list and Number 15 among all-time volunteer-producing schools. This year, the UA is introducing the Peace Corps Prep Certificate Program to encourage undergraduates to incorporate relevant coursework and community service into their education and increase their chances of getting into a competitive Peace Corps position. This poster examines the past year of recruitment, including successes and challenges, and looks forward to the future recruitment plan to maintain University of Arizona's high national ranking.

Lauren Harvey

Panama Bilingüe: English Language Teaching Policies and the Realities of Panamanian Education

The Ministry of Education in Panama implemented the Panama Bilingüe program in 2014 with the goal of creating a bilingual Panama within ten years. Building on the author's Peace Corps experience in Panama and subsequent participation in certain aspects of Panama Bilingüe, this poster presents an overview and analysis of the program, including a description of the curriculum, a discussion of its implementation, and suggestions for its improvement.

Dionna Hatch & Jenny Moscato

Nature's Notebook: Resources for the National Phenology Network

Nature's Notebook is a part of the USA-NPN organization. This program works with groups and individuals to collect phenological data. Phenology is the study of cyclic and seasonal natural phenomena in relation to plant and animal life. In partnership with Nature's Notebook, data from Manzo Elementary, Tucson Mission Garden and the Krutch Garden on the University of Arizona campus has been regularly collected and is contributing to the overall understanding of how climate change is impacting the cycle of native plants. Observations were made from a variety of native species like ocotillo, saguaro, jojoba, prickly pear cactus, Gooding's willow and more. This data is then added to a nationwide database that is available to researchers, school groups and individuals. Nature's Notebook can create data tables and graphs through its website and Visualization Tool. Other tools created for individuals, schools and groups are plant identification cards that have descriptions and photos that define phenological stages. These cards are a tangible, visual tool to help users from elementary-school age to adults recognize species that they have tagged and numbered at their site. Data collection sheets and the Nature's Notebook phone app are other tools that facilitate data collection.

Charisse Iglesias

'No' to Being Low: (Re)seeing Obstacles Through a Growth Mindset Lens

Goodwill GoodGuides collaboratively designed a mentor program curriculum for seventh grade students at Pistor Middle School that forefronts the growth mindset (Dweck, 2006) as a gateway to prepare at-risk youth for college. Students practiced seeing everyday obstacles as opportunities from a young age, an especially needed skill for at-risk youth who often lack the early socialization into practices such as planning ahead, critical thinking, and addressing failure as opportunity. Every session began with a "Highs and Lows" activity in which students shared a good experience (High) and bad experience (Low) that recently occurred. Considering that productive learning environments are contextualized (Gutierrez, 1999), the activity was complicated several months ago by prompting students to re-see their Low through a growth mindset lens, ensuring the concept's relevance in their everyday lives. Preliminary results showed that students were better able to apply the growth mindset to their own Low and to the Lows of their peers with very limited verbal prompting than they were at the beginning of the fall semester. Further research would describe students applying the growth mindset to different contexts and situations through personal interviews, scenario building, real-life situations, and a combination of a written, spoken, or visual post-test to more adequately measure application and understanding. Implications of this research suggest that the growth mindset is an effective tool for contextualizing the at-risk youth classroom for college readiness.

Rebecca Johnstone

Mission Garden's Medicinal Garden

This poster works alongside Mario and Brad's Mission Garden posters talking about the garden as a whole. In this individual poster, the main focus is on the Michael Moore Herbal Garden located on the west side of Mission Garden. The main contributor, Donna Chesner, and her herbalist group have been working the last 4 years to bring in and plant a medicinal garden using the plants from Michael Moore's book. Only within the last few months has the garden finally started getting planted. The plants in this garden are ones used commonly as ailments from the cold to hypertension. The purpose of the garden is to be an educational aspect for the community and source of these herbs to further their use in this area. Without a continuation of this knowledge, it could become lost in all our current technological advances in the medical world.

This poster will highlight certain plants and examples of how to use the plants for medicine as well as give an overview of the purpose of the garden, its contributors, what plants are currently planted, and what the future entails for the garden.

Brad Kindler

Tomorrow's Garden

Today challenges of climate change, population growth, biodiversity loss, and water scarcity, lead farmers to ask new questions about how to grow food in a changing environment. Additionally, innovative technology and public food preferences present challenges of production changes for farmers to consider. Honoring Tucson's diverse community and unique history, Tomorrow's Garden seeks to punctuate Mission Garden's historic timeline with a demonstration of sustainable and innovative agricultural practices that have the capacity to adapt to changing climate, as well as build community through design process and project implementation.

Keegan Krause

Working with AzCHOW: Organizational Strengthening in Public Health

There are currently an estimated 1000 Community Health Workers working in 19 counties and 15 tribal communities in the State of Arizona. The Arizona Community Health Workers Association (AzCHOW) was developed by and for CHWs in order to meet the professional needs of these public health workers by: 1) strengthening professional development opportunities for CHWs, 2) increasing the capacity and credibility of the CHW workforce, and 3) strengthening collaboration with community, government and educational organizations to meet the needs of local populations.

Continued...

AzCHOW has recently gained 501c3 status and is now working towards a state-recognized certification for CHWs. As a Coverdell Fellow, I worked with the executive director of AzCHOW to strengthen the organizational structure of AzCHOW, including working with the board of directors to update bylaws and regulations, grant writing, building a new website, assisting with the creation of the new CHW certification platform, creating and maintaining social media presence including outreach with local governmental and educational institutions. Future projects include working with AzCHOW and associated CHWs to design a comprehensive curriculum for a CHW training center.

Breanne Lott

Silo-Busting in a Health Department: Studying Intra-Organizational Collaboration

As public health departments emphasize a focus on population-based services and shift toward policy, systems, and environment change, collaboration is an increasingly important public health skill. Challenging to delivery of broad population-level health programs is coordination of services and intra-organizational collaboration. This study was designed to measure and explore characteristics of collaboration at Maricopa County Department of Public Health. The Relational Coordination measure was adapted for novel application in a public health setting and quantified levels of cross-programmatic collaboration of 19 offices, while semi-structured key informant interviews identified facilitators and barriers to collaboration in the department. The RC measure allowed each office to score others from 1 (low) to 5 (high) on 7 facets of collaboration. Relational coordination varied significantly according to the focus of service with offices categorized as internal capacity building or population-level health, like the Office of Performance Improvement (RC score 3.97), scoring higher than offices providing direct care and client-focused curative services, such as Healthcare for the Homeless (RC score 2.20). Deliberate support from senior management publicly prioritizing collaboration and purposive cross-sector meetings create culture change that empowers employees to meet “across office lines so that...people [get] more comfortable outside of their silos.” Using the RC measure to describe frequent, timely, accurate, and problem-solving communication, mutual respect, shared knowledge, and shared goals provides management an opportunity to address areas for improvement while capitalizing on collaborative strengths. Transformation of intra-organizational collaborative characteristics can be measured through time providing data-driven decision-making capacity to public health leaders.

Michael Mansfield

Improving Communication Through Literacy

Literacy as a concept has grown beyond its initial definition. To simply refer to it as the ability to read and write does not encompass its full potential. It is now known that there is a multitude of approaches in which we use literacy depending upon context. From a sociocultural perspective, we can regard literacy in three distinct ways: 1) literacy as a social practice, 2) multiliteracies, and 3) critical literacy. In order for college freshman to have the best possible chance to adjust to the rigors of academic life—as well as what comes after it—it is paramount that they are exposed to the sociocultural perspective of literacy as early as possible. For this reason, I have developed an English composition curriculum for freshman at the University of Arizona specifically designed to build skills in all three of the aforementioned sociocultural literacies.

Casey McKaughan & Andrea Shelton

Clínica Amistad: Promoting Health Care Access among Tucson's Underserved

Clínica Amistad, a project of Amistad y Salud, is a free health clinic that serves Tucson's low-income, uninsured community. The grassroots non-profit 501 ©3 organization arose from humble beginnings in March 2003 when it first opened its doors – transforming a Women, Infants, and Children's (WIC) Office after hours into a makeshift clinic run by a few dedicated individuals. Over the past 15 years, the clinic has met the health needs of more than 20,000 people without medical coverage and continues to grow exponentially. Volunteers are heavily relied upon in this unique clinical setting, who comprise more than 97% of the total staff. Currently, more than 50 volunteer licensed professionals, including primary care providers, alternative care practitioners, nutrition counselors, health insurance navigators, and registered nurses, provide services at Clínica Amistad. Additionally, there are approximately 85 volunteer staff – more than 75% of whom are current students or recent graduates from the University of Arizona or Pima County Community College. This poster outlines the primary responsibilities of the Clinic Manager and several additional roles that have been fulfilled through this position. It highlights some of the main partnerships that have been fostered between the clinic and other local organizations within the past year. Additionally, it provides a visual element that lends a glimpse into the daily operations at Clínica Amistad. The final section discusses the growing needs and demands of the clinic. Furthermore, it incorporates future possibilities and new areas for growth and improvement within the Clinic Manager role.

Caitlin Meyer Krause

Assessing The Bio/Diversity Project's Impact on K-12 and University Students

The Bio/Diversity Project, a collaborative effort between the University of Arizona's Women in Science and Engineering Program, the Arizona Sonora Desert Museum, and the Friends of the Saguaro National Park, aims to increase more diverse and inclusive environmental science communities along the K-16+ pipeline. The program places UA students, traditionally underrepresented in the environmental sciences, with K-12 school partners as environmental science outreach interns. The K-12 partner schools serve primarily low-income and minority students. The interns deliver innovative environmental science lessons focused on the topic of biodiversity to the students. In addition, the interns receive training, mentorship, and work experience through partner organizations, facilitating their academic and professional development. A mixed-methods research design is being used to assess program impact on K-12 and university students, focusing on science identity, motivation, self-efficacy, and career goals and outcomes among program participants. The Draw-A-Scientist Test and Science Motivation II Questionnaire are being administered to K-12 participants. Semi-structured interviews are being conducted with University of Arizona students who have served as programmatic interns and K-12 teachers whose classes have participated in the program between 2017 and 2018. The interviews are being coded to identify themes, patterns, and variations between program participants' experiences of and reflections on the program. Data is currently being collected and results have yet to be analyzed.

Jeremy Miller

Chasing After Grants for Nonprofits: What Happens If You Catch One?

What are the pitfalls of grant funding? The question sounds counterintuitive, right? Every nonprofit organization wants more grant money. But is this always a good outcome? In this poster, I will present a case study in which the grant was one of the primary factors that undermined the organization's success. When I started volunteering at the organization, Pathways to College (P2C), it was nearing the end of its first fiscal year on a grant it received through the Department of Education. It had served nearly seven hundred adult participants from underrepresented communities in postsecondary education who were interested in obtaining a college degree. This involved helping participants navigate the application process, identify and apply for financial assistance, and select career paths. Despite the organization's relative success, seven hundred students were less than the thousand that the grant stipulated, and the Department of Education did not renew its funding. Obviously, the organization holds some blame. The question P2C forgot to ask, however, was whether the grant, itself, set them up for success. In this case, it did not. This poster will explain some of the reasons why in hope that other nonprofits will benefit from the lessons.

Joseph Navelski & Stephen Oliver

Community and School Garden Program (CSGP)

School gardens are important sites of learning and discovery. Among their benefits, they provide opportunities for teachers to translate school curriculum into hands-on activities, spark curiosity and creativity in their students, and foster a sense civic responsibility and stewardship on school campuses. The UA Community and School Garden Program (CSGP) supports local garden projects by placing undergraduate and graduate student interns at school and community gardens throughout the City of Tucson. In participation with AmeriCorps, the Tucson Unified School District (TUSD), and the university, Peace Corps Fellows Joe Navelski and Stephen Oliver have provided sustained support to CSGP and local schools. Their assistantships have given them the chance to apply their knowledge gained as agriculture volunteers in Nicaragua while enriching their understanding of the local food system and the benefits of outdoor learning.

Mario Nuño-Whelan

Mission Garden: Interpreting 4,000 Years of Farming in Tucson

Mission Garden is an agricultural heritage farm with timeline gardens that provide a hands-on showcase of Tucson's 4,000-year-old history of growing food. As a Peace Corps Fellow, my work has included planting, harvesting, fertilizing, and regular upkeep of the various gardens while at the same time helping to construct the Mexican Garden. Along with a committee of community volunteers, board members, and paid staff, we are working to create a demonstration garden and event space that reflects the Mexican agriculture and backyard gardens of the 19th and 20th centuries.

Emily Palese

Moving Students to Write: Move Analysis as a Tool for Teacher Training

Teachers of second language writing (SLW) need to communicate assignment directions in a way that is both clear and concise while also providing enough directive support for students. This is challenge is perhaps most significant when crafting assignment prompts for high stakes writing projects (Reid & Kroll, 1995). While assignment prompts have certain typified generic features (Miller, 1984), these features vary greatly according to course, instructor, and context. As such, teachers new to SLW must learn what these particular features are, which features to prioritize, and how to format them in a way that is both intuitive and helpful to students. However, teachers are generally left on their own to determine which features they should include, exclude, or adapt, and how these features might be constructed, organized, and emphasized.

Continued...

This project proposes that a move analysis of assignment prompts can show teachers what information is typically included, and how that information is signaled, structured, and organized. To model this potential, this project conducts a move analysis of 26 writing prompts. The insight gained from this study can aid teacher training by explicitly highlighting the ways in which instructors construct high stakes writing assignments. With this insight, instructors can make more informed moves when designing writing assignment prompts.

Katey Redmond

In Defense of Data and Quality Assurance: Supporting an HIV Clinic's Operations

Grant applications and data management are critical aspects of most public health programs. The Petersen Clinic at the University of Arizona is the main facility offering HIV care in Pima County. With over 1000 active patients with care funded by the Ryan White Services Grant through the Health Resources and Services Administration (HRSA), it is critical for the clinic to have accurate data to fill out the annual service report to secure funding, understand client needs, gaps in care, and how to better capture members of key populations. From August 2017-March 2018 the Clinical Quality Management Committee (CQM) worked to develop appropriate indicators for the new system and check accuracy of client information between 3 databases. The clinic staff hopes that the new protocol will help client data be more resistant to technological shocks and build their quality assurance efforts.

Natalie Reyes

Wage and Hour Division: Enforcing labor laws to enhance the welfare of the nation's workforce

Poster will demonstrate the Wage and Hour Division's mission, the specific laws enforced, and the role investigators play in ensuring that employers are adhering to the labor regulations. These include for example; Minimum Wage and Overtime compensation, Child Labor laws, the Family Medical Leave Act, various work visas, and government contracts etc. The poster will include the statistical impact the agency has in its work, and demonstrates to the public how it can be utilized to protect both employees and employers in the United States.

Shayna Rosenblum

Community Mapping Resources for Banner UMC South Campus

Medical Residents at UMC Banner South Campus are interested in the community that they serve. In order to provide competent care reflecting the sociocultural demographics of their patient population a community assessment will be conducted. This will evaluate resources in the community such as parks, schools, grocery stores, food banks, community gardens, bike lanes, community centers, libraries and gyms. We will look at these resources based on zip code and give observations and evaluations. The data used is de-identified patient population demographics of the people served at Banner South's Family and Community Medicine Clinic. These resources will then be compiled into a visual map that residents can use to direct patients to resources as well as better understand the community that they serve.

Ryan Shortal

Thirsty? Novel Process for Removal of Viruses from Treated Wastewater

As the world population continues to grow, the demand for potable water grows along with it. As such, new technologies are required in order to meet this rising demand. The research being presented demonstrates a low-cost alternative to conventional water treatment processes and is ideal for water stressed regions looking to recapture water that is otherwise wasted. The use of high-basicity poly-aluminium chloride (PACI) as a coagulant pretreatment for ceramic membrane microfiltration (MF) of wastewater treatment plant (WWTP) effluent for the removal of viruses is a promising technology for future implementation of direct potable reuse (DPR) water treatment systems. In many instances, this technology is superior to conventional water treatment methods (such as sedimentation and rapid sand filtration) for several reasons including cost, maintenance, and energy demand. Unlike polymeric and other inorganic membranes which are commonly used in water treatment, ceramic membranes are able to withstand extreme acidity and alkalinity as well as significantly higher operating pressures. These abilities allow for the use of strong acids and bases in cleaning, high pressure hydraulic backwashing, and operation at a high flux. The adoption and expansion of this technology throughout water stressed areas will increase access and affordability of potable water to the people living in those areas.

Ruben Soliz

The Future of Health Policy and New Perspectives on Medicaid

Cost, coverage and access to high quality care are preeminent problems in the United States health care system. Medicaid, which expanded access to care under the Affordable Care Act, significantly increased costs, with program spending responsible for 9.2% of the federal budget. There are several proposals coming from the States which are intended to control costs and promote the long-term sustainability of the program. Beneficiary cost-sharing is one such proposal, with some states advocating for and implementing Medicaid health savings-accounts. These accounts have the potential to promote personal responsibility and prepare beneficiaries for a transition to the private insurance market. Work requirements, which are targeted at able bodied adults, are another proposal for achieving similar objectives. They have been incorporated into other government-sponsored programs, although their cost-effectiveness and success rate has been questioned by critics. Through policy research and analysis, I have generated policy recommendations and evaluation metrics for implementing these initiatives. This provides a framework for Arizona and other states which are seeking to innovate and control the costs of their Medicaid programs.

Joe Stewart

Neighboring Partnership Coordination

Whether through neighborhood partnership, building houses or home repairs, Habitat for Humanity Tucson is constantly looking for new ways to improve the community. One of Habitat for Humanity Tucson's latest efforts revolves around the poverty initiative in the Amphi neighborhood. Habitat is partnering with local stakeholders, such as Literacy Connects and the IRC, as well as the University of Arizona in order to help the residents of Amphi build a safer, more livable neighborhood. Among the projects the initiative will include are building a community garden next to the Literacy Connects building and a neighborhood clean-up, but on a broader level, Habitat will be working with partners on crime reduction. As a Coverdell Fellow, Joe Stewart is working with both the Development Practice program Director at the University of Arizona and Habitat for Humanity Tucson to develop a plan of action to better serve the Amphi neighborhood. Moving forward, the plan is to continue the partnership with the Masters in Development Practice program and Habitat and create a hands-on practicum course for future MDP students.

Lynn Tchida

Human Trafficking - A Critical Issue and Call to Action

Human trafficking is a social phenomenon and often referred to as modern-day slavery or trafficking in persons. It's a crime that involves the exploiting of a person for the specific purpose of sex or labor. Relevant literature confirms that human trafficking affects millions of people globally every day. Sex and labor trafficking is even taking place in Southern Arizona communities. This poster addresses who is particularly vulnerable to sex trafficking, how victims are lured into the illegal trade and what they may experience, the type of settings in which trafficking can occur, potential warning signs, and the difficulty in detecting it. Current efforts to reduce and prevent victimization is happening in our region through the UA Southwest Institute for Research on Women (SIROW), Southern Arizona Anti-Human Trafficking Unified Response Network (SAATURN) initiative. Information about protecting children, reporting exploitation crimes to law enforcement, available resources and training and ways to get involved in local intervention and public awareness activities will be provided. International, national, regional, and local inter-agency cooperation, information sharing, and enforcement of effective policies vital to address the booming multi-billion dollar, global business of modern-day slavery is discussed. Concerted and collaborative efforts, involving many U.S. and International government, non-governmental (non-profit) organizations, and private foundations, to increase awareness, disseminate global indexes on "modern slavery" and allocate funds to combat human trafficking is happening! However, more deliberate, on-going research, data collection and measurement indicators, comprehensive repositories, and enhanced networks for coordinated policy and operational responses is needed.

Lindsey Thatcher

Creating Policy and Procedures for Quality Improvement at Clínica Amistad

Establishing compliant and clear policies and procedures is an essential part of any organization, especially for a health care provider. Clínica Amistad is a free health clinic that serves Tucson's low-income uninsured community. During this outreach assistantship, I worked with the Administrative Coordinator and other key stakeholders to develop a comprehensive and compliant Policy and Procedures Manual to be utilized at the Clinic. Additionally, I collaborated with the Medical Director and Clinic Managers on quality improvement measures for volunteers and medical providers. The Policy and Procedures Manual and the quality improvement efforts will support the Clinic towards increasing efficacy and professionalism for the patients as well as compliancy to state and federal requirements.

Mark Tibbetts

Education and its Impact on the Human Species

Training teachers to be great teachers is essential to students receiving a great education. That is exactly what Teach Arizona does. The year-long student teaching assistantship at Pueblo...includes mentoring from a master teacher, classroom management techniques, curriculum and syllabus development, lesson planning, and a focus on student-based learning activities. Pueblo High School is a Tucson Unified School District that serves 1,527 students and has an 82% graduation rate. More than half the students who take AP exams pass the tests. Teach Arizona contributes greatly to developing teaching proficiency and skills to promote success through student-based learning. This poster shows an example unit and lesson plan on WWI and WWII. This product exemplifies what Teach Arizona wants its graduate students to practice implementing in the classroom throughout the second half of year-long student assistant-ship.

Juanita Trejo

Development and Implementation of a Database for NAMI of Southern Arizona

The National Alliance on Mental Illness of Southern Arizona (NAMI) offers free advocacy, education and support to individuals with Serious Mental Illness, their families, and friends since 1983. NAMI's goal is to eliminate stigma and offer hope for recovery and a fulfilling life to their members. NAMI is funded by private donations, membership dues, grants, government funding, and reimbursement from the Arizona Medicaid system. NAMI has been affected by recent changes to the reimbursement system, shifting to a value-based purchasing model. The development and implementation of a database tracking system of member involvement in NAMI programs and to evaluate member satisfaction with the Peer-to-Peer program. After learning about the services provided by NAMI and current data collection methods, the intern worked with the Program Director to identify outcomes that would be useful to track for reimbursement. The intern created a Microsoft Access database with information from 100 members using NAMI's electronic health records. The intern also modified a previous survey to evaluate member satisfaction with the Peer-to-Peer program. Thirteen members completed the satisfaction survey and a short report was created. Results from the satisfaction survey showed that members were satisfied with the course information, gained knowledge, and experienced positive impacts on their lives. NAMI staff continue to use the new Access database to track member information and program involvement. This database has increased NAMI's ability to track intended outcomes for their programs and this new data will help them apply for future funding.

Mario Trejo

Effects of HIV status on response to treatment for non-metastatic cervical cancer patients in Lusaka, Zambia

The purpose of this study was to measure any differences in cervical cancer progression between HIV-positive and HIV-negative individuals in a high-risk region. Cervical cancer is the fourth most common cancer among women worldwide, with highest incidence and mortality occurring in Sub-Saharan Africa. In Zambia, the annual incidence is 58/100,000 and the mortality rate is 36.2/100,000, making it the most common cause of cancer morbidity and mortality among women. HIV is a known risk factor for cervical cancer development and, with a national adult prevalence of 16%, women in Zambia are at high risk. The Cancer Diseases Hospital (CDH) in Lusaka, Zambia is the only tertiary hospital in country that provides specialized cancer treatment; about one third of their cervical cancer patients are HIV positive. This internship sought to develop a database of cervical cancer case information and study if co-infection with HIV was associated with cancer treatment response. This case-case study included 577 FIGO stage I and II cervical cancer patients seen at the CDH between 2008 and 2012. Abstracted data from cancer medical records included age, residence, occupation, comorbidities, cancer treatment information, and tumor response to cancer treatment. An algorithm was developed to link cancer data to the national HIV database to obtain additional information about HIV status, treatment, and compliance. Approximately 43% of patients were HIV positive. Of patients who completed their first cycle of radiotherapy, 27% had gross residual tumor and 20% had progressive disease that resulted in distant metastasis. There was no statistically significant difference in progression by HIV status. Future data analyses will assist in developing cancer education programs for cervical cancer patients about the importance of HIV treatment compliance in improving survivorship. Also, the results will help in professional education of oncologists for better monitoring and management of cervical cancer patients during the course of their treatment.

Kathryn Tucker

Voluntary Certification of CHWs in Arizona: A Systems Change Approach to Workforce Development

Community Health Workers (CHWs) are frontline public health workers that improve health outcomes and decrease costs for marginalized communities. Around 1000 CHWs work in 19 counties and 15 tribal communities in the state of Arizona. Despite their proven record of success improving the cultural competency of care and efficiency of the health system, CHWs often do not receive recognition or adequate compensation for their work, and there is no sustainable financing mechanism for CHWs in Arizona. The Coverdell Fellow worked with the Arizona Community Health Workers Association (AzCHOW) and the Arizona CHW Workforce

Continued...

Coalition to design and pilot a voluntary certification process for community health workers as a mechanism for sustainability and recognition for the work of CHWs. The voluntary certification, which includes training program approval and CHW certification based on 10 core competencies, supports AzCHOW's current legislative efforts to create a voluntary certification process through the Arizona Department of Health Services that will allow for reimbursement of CHWs through health plans.

Kelli Williams

ThinkTank: Developing Learning Strategies

This poster will examine the influence of campus resources on university students and the learning strategies needed to be a successful student. Students add a dynamic influence to the University of Arizona through their knowledge, creativity, and ambition. Think Tank is a campus resource that offers tutoring services to Math, Science, Writing, Spanish, and French. Tutors are taught to encourage metacognition, academic self-efficacy, and transferrable cognitive strategies in all their students. Think Tank maximizes student potential by providing them the tools they need to succeed at the University of Arizona. Think Tank also provides tutoring to the wider Tucson community and underserved minority student populations. As a Peace Corps Coverdell Fellow, Kelli Williams has contributed more than 300 hours to Think Tank as a graduate assistant. Her work includes supervising and mentoring undergraduate students, creating a positive learning environment, and assessing the tutoring services.

Ryan Young

Tribal Water Management and Risk-Sharing Innovations

Native American tribal governments have been active over the past several decades as negotiators of settlements which quantify tribal water rights and address regional water challenges. The pressure to quantify tribal rights and to create water management strategies and risk-sharing agreements has increased as populations in the West continue to grow. Many tribal water settlements and agreements involving tribes are being implemented to meet needs of tribal communities, environmental stakeholders, cities, and agricultural water users, with the state of Arizona accounting for a large share of these. In 1908, the U.S. Supreme Court case *Winters vs. the United States* clarified that Native American tribes are guaranteed access to water on the land reserved to them to fulfill the purposes of the land reservation.

Continued...

These purposes can include water to irrigate crops, community drinking water, and economic development activities to provide a homeland and livelihoods for tribal members. Many tribal nations have pursued quantification of their water entitlements, through either litigation, negotiated settlements, or a combination of both. Since the 1970s, over three dozen tribal water right settlements have been formalized in the U.S. Recently, tribes are initiating innovations in regional water management. Their legal status as sovereign governments not ruled by state water law and their senior water entitlements put them in a unique position. In times of drought, these agreements are relied upon to provide structure to water management. This poster highlights examples of tribes' innovative approaches in regional water problem-solving in the western United States, including Arizona examples.