Choosing Your Dissertation Topic: An Interview with Kimberly Brown, M.A., Doctoral Candidate

Interview by Stacey Gullion

First of all, congratulations on all your hard work toward your doctoral degree! What will your degree be (official title)?

Thanks!!! My “official” degree will be a Ph.D. in Education Studies with a concentration in Urban Education.

What is your dissertation research/topic? How did you choose it?

My research will explore intergenerational poverty and how the Eastern Michigan University McNair Scholars Program enhances post-secondary degree attainment for “at-risk” populations. Until early January 2017, my research involved the inequity of math education for students in urban schools. However, I remembered a piece of advice: “The best dissertation is a completed dissertation.” In the end, it was more feasible to work with the McNair Scholars Program and its awesome students.

How do you stay motivated when the research seems daunting?

I am a reflection of my family and community—a community my children look to as an example. Completing this degree is bigger than for personal gain. It has the potential to influence and change the lives of others. My research may be daunting, but it is significant and pertinent. As such, keeping the end goal in mind is a must. And, leaning on others for support is crucial. I have just formed a writing group with three doctoral students from my cohort. Being accountable to not only ourselves, but also to others, will assist me with staying on task.

What are your plans for after you complete your Ph.D.? What is your ultimate career goal—or dream job?!

Gosh... It still seems so far away. I am an Ypsilanti native and will likely stay in the area and seek a transition to a position in academic support for underserved populations. Ultimately I would like to direct a program like McNair, or develop a program that is “tailor-made” for first-generation, underrepresented students, and students from families living in poverty. Such populations have unique needs that universities must address to increase post-secondary degree attainment.

Do you have any advice or words of wisdom on how to choose research topics, and how to keep going strong as our Scholars move through their studies?

“Don’t worry!” A topic will develop over time. It may be something you’ve always wanted to study, something of interest “discovered” in a class or at the recommendation of a faculty mentor. I started off interested in researching why there were so few minority students graduating with STEM degrees. Over time that changed. So Just remain open to new ideas. At some point your topic will solidify—but remember to stick with something you’re passionate about. This will help you through comprehensive exams and the dissertation process. Stay focused and believe in yourself!!
**McNair Faculty Spotlight: Dr. Ashley Glassburn Falzetti**

Dr. Ashley Glassburn Falzetti, Assistant Professor of Women’s and Gender Studies at EMU, is a McNair Scholar! Dr. Falzetti received her B.A. and M.A. in Philosophy, and earned her Ph.D. in Women’s and Gender Studies from Rutgers University in 2014. She is currently working on two major projects—one is focused on narratives surrounding the histories of Native Midwestern peoples and communities, while the other seeks to produce better ways of teaching Maamia Grammar, a Native American language spoken by the Miami Indians of Indiana, of which she is a member. Dr. Falzetti says to our Scholars, “Focus on projects that you’re passionate about. As a first generation college student there is often added pressure to make your degree ‘count,’ and a lot of people interpret that to mean ‘profitable.’ While all of us will be able to make a living, you will always do better and give your most to projects that you care about personally.”

**Grad School Success!**

Earning a 3.9 during her first semester in the Higher Education-Student Access and Success program at the University of Michigan, Tiffany Browne (‘16) is serving as a Master’s Co-Chair for the Graduate Organization of Students in Higher Education. Tiffany is responsible for planning and executing recruitment events for Teacher Education students, and works in the Office of Student Affairs while attending classes full-time. Tiffany sends her greetings to the current Interns and Cadets, and reminds them to make the most of every opportunity!

**Congratulations, Demarco!**

Please join us in congratulating Intern Demarco Johnson who, with his mentor Dr. Kimberly Barrett, has been awarded the Provost's Undergraduate Stimulus Research Award for his McNair Research. Demarco is studying the effects of pollution on the health of children in Detroit's River Rouge area, and most recently presented his research at EMU’s Martin Luther King, Jr. Celebration.
Our **Interns** are currently hard at work on fascinating research projects! Here are abstracts detailing some of their innovative projects!

### External Cavity Diode Laser for Atomic Spectroscopy
**Sam Carano, Dr. Eric Paradis, Faculty Mentor**

The purpose of this research project is to build and develop a working external cavity diode laser (ECDL). ECDLs are used in atomic and molecular spectroscopy to provide a precise frequency probe of the atomic level structure. More specifically, an ECDL allows us to measure the level structure of rubidium atoms using a photodiode amplifying circuit. An electronic circuit provides frequency control of the laser by adjusting the optical feedback to the diode. Our poster will elaborate on the conceptual physics associated as well as the construction process concerning the ECDL, controller, and photodiode circuit.

### “Can You Hear Us Now?: Engaging African American Youth Voices in Urban Communities and Schools”
**Alyssia Hence, Dr. Celeste Hawkins, Faculty Mentor**

This qualitative study will explore the educational experiences of African American youth with a concentration on the individuals who populate poverty stricken areas—specifically those students who were expelled or suspended from school—in an effort to explore the school-to-prison pipeline. According to the American Civil Liberties Union (2015), “the "school-to-prison pipeline" refers to the policies and practices that push our nation's schoolchildren, especially our most at-risk children, out of classrooms and into the juvenile and criminal justice systems. This pipeline reflects the prioritization of incarceration over education.” The objective of this research is to explore factors that contribute to the school-to-prison pipeline by analyzing the perspectives of African American youth. Our goal is to collect qualitative data on what should be done within urban schools and communities to attenuate the long lasting epidemic of the school-to-prison pipeline.

### “Investigating the Species Relationships in *Megistostegium*”
**Tahsina Shimu, Dr. Margaret Hanes, Faculty Mentor**

The island of Madagascar is known for its rich fauna and flora and is the ideal hotspot to study species and speciation, especially species in the Hibiscus tribe (Vences et al., 2009; Koopman and Baum 2008). This research will determine how the three species in the genus *Megistostegium* are related to one another, and investigate how speciation may have occurred. Genomic DNA will be extracted from all the individual plants per species. Each individual plant will then be sequenced using RADSeq next-generation sequencing methods. Genetic variation will be summarized across all individuals, populations, species, and across geographical space. Phylogenies will be constructed to understand how the three species diverged from one another and what influenced such changes to occur.
“Effects of Outside Ions on Oat Health”
Amanda Wardin, Dr. Jose Vites, Faculty Mentor.

While we know the effects of individual nutrients on plant health, not much is known about cross effects and retention of other ions. We are testing to see if composition of nutrients and ions within the growing water has an effect on oat health and growth. We used two setups, both involving Avena sativa (common oat) seeds in a nutrient deficient medium. These were watered with solutions including specific deficiencies to observe the effects of each, or with water from different sources which will contain outside ions. Oat health will be determined by mortality rate, average blade length and beta carotene levels, along with qualitative analysis. All solutions are analyzed via ion chromatography.

“Domestic Violence and Batterer Intervention Programs, the Fight for Doing Right: A Comparative Analysis”
Yeliani Valdez, Dr. Paul Leighton, Faculty Mentor

Domestic Violence issues are extremely complex. With a society that indirectly or directly encourages violence against women through rap songs, gender norms, social media, and systemic inequality, there has been a continual push to bring domestic violence to an end. Although reaching for overall gender equality is important, in the case of domestic violence, we must first acknowledge the perpetrators’ role and responsibility for their actions, and then hold them accountable. The Duluth model is a Batterer Intervention Program (BIP) that offers a variety of treatment options including anger management, therapy, and counseling. There have been dialogue and disagreements on what method works best for the perpetrator. This research will analyze the effectiveness of the Duluth model, its adaptations, and other treatments options. This research will also entail observation sessions of the (BIP) of the Duluth Model.

“Effects of Submergence Depths on Swimming Capacity of Sea Lampreys”
Nayeli Sanchez, Dr. Ulrich Reinhardt, Faculty Mentor

Invasive sea lamprey (Petromyzon marinus) is a fish parasite that has damaged the Great Lakes ecosystem. Since sea lamprey migrate from lakes upstream to spawn, in-stream barriers that prevent passage can help reduce population size. Assessment of swimming kinematics is necessary to understand how lamprey navigate across barriers at various submergence depths. We recorded attempts of sea lampreys to cross wetted ramps varying in water depth and used video analysis to examine whether these differences would allow sea lamprey successful passage. This research may provide insight towards designing a selective barrier that allows native fin-fish upstream passage but denies it to sea lampreys.