**Justin Almanza**
Mentor: Carol Benton, AMT

*Supporting a Well-Rounded Music Education: A Comparison of Commonly Used Beginning Band Method Books*

Having a good foundation is essential to any type of education or development; music education is no different. While studies have shown that having an effective teacher in the classroom is often the best indicator of student success, having good materials can be valuable to both the instructor and the student. This research project will focus on comparing and contrasting different commonly used beginning band method books from both the teacher and student perspectives. Topics to be addressed include ease of use by student, ease of use by teacher, amount of information, organization of information, and sequencing of educational objectives. These books will be analyzed in light of current standards in music education as well as broader trends within the education community. I will give a presentation comparing and contrasting the research findings, offer suggestions for teachers using or considering these methods, and discuss alternative and supplementary materials that could be used in the classroom.

*Taylor Alvarez*
Mentor: Jose Da Cruz, CJSPS

*Cybersecurity Initiatives in the Americas: Implications for US National Security*

This research paper explores current cyber security initiatives in the realm of Latin America. Our primary focuses are the nations of Argentina, Brazil, Cuba, Mexico, and Venezuela. Internet usage in Latin America is becoming increasingly prevalent among the population. With this rise in technology comes a number of concerns for the nations under study here. How should Latin American states respond to cybercrime and why is this issue more pertinent than cyber terrorism concerns within Latin America? How far are states willing to go to...
ensure national cyber security while protecting public privacy? An analysis of actions taken by these five states will be examined and recommendations will be made by the authors to strengthen official responses to cybercrime. In sum, we recommend that a more successful national cyber policy frame should include the following: a strong legal foundation that covers cyber-based offenses, the formation of a national cyber response team (CSIRT), robust international and regional cooperative coalition-building efforts, the increase of technological potential for public and private personnel, and, finally, public awareness campaigning on the topic of the necessity of basic cyber security. Given the importance of the cyber domain in the conduction of foreign policy and its transnational nature, it is the authors’ recommendation that these states should prepare defensive capabilities to combat cyber-attacks.

Erika Andres
Mentor: Randall Reese, AMT

Composing for a Woodwind Quintet

Writing for a woodwind quintet creates special compositional problems. Because each instrument of a woodwind quintet, consisting of flute, oboe, clarinet, horn, and bassoon, has its own unique range, timbre, and capabilities, the composition must be written so that the individuality of the parts is preserved but also so that the ensemble still functions together to create a coherent whole. In addition to the problems created by writing for a woodwind quintet, more challenges arose when I avoided traditional harmonies involving triads in order to explore new and non-traditional harmonies. In order to create an interesting composition that still works within all of these restrictions, I used two compositional strategies. For the first method, I mainly used static, pentatonic harmonies but, I then created interest by layering and adding voices, in addition to increasing both dynamic levels and rhythmic and melodic activity. The second method I used was to have all of the voices present the majority of the time, but constantly changing harmonies based on seconds and tritones to create interest. Throughout the composition, I gave each instrument several opportunities to play parts with the primary melodic interest. The final result of these efforts was a programmatic work for woodwind quintet depicting two different scenes of winter, my composition *Winter Images*.

*Destinee Andrews
Mentor: Felicity Turner, History

Ignoring the Oath to Defend and Support the Constitution: Reanalyzing Korematsu v. United States

Fred Toyosaburo Korematsu waited thirty nine years for justice. In 1944 the Supreme Court upheld Korematsu’s conviction of noncompliance with Civilian Exclusion Order No. 34 based on claims of military necessity. Almost 40 years later, on November 10, 1983, United States’ District Judge for the District of Northern California, Marilyn Hall Patel, overturned the conviction. Consequently, Fred Korematsu became the first and only person to have a conviction upheld by the United States Supreme Court only to later have it set aside by a lower court’s judgment. When the War Department released a judgment report in April of 1943 explaining the need for internment camps, Assistant Secretary of War John McCloy, knew it would damage not only the United States’ case against Korematsu, but it would weaken the claims that Japanese internment was necessary as well. Subsequently, McCloy ordered all 10 copies to be immediately destroyed. The United States Justice Department was never able to read the reports; therefore, the Supreme Court Justices never received the relevant information. More than likely,
the purposefully excluded information would have prompted the Justices to overturn Korematsu’s conviction for violating the due process clause in the 5th Amendment

Gryffen Andrews
Mentor: Rebecca Wells, Middle and Secondary Education

Twitter and #Hashtag Mania in the Classroom

Engagement in a middle school classroom is only successful when the students are interacting with the lesson. One way to create this interaction is to bring social media into the classroom in a safe and engaging way. I created Twitter and #Hashtag Mania posters in my Internship Field Experience course. Students use the Twitter Account at the beginning of class to formulate/explain an idea in 20 words or less. Responses are based on a question from the day before. This format is used to get the students to compress their information into a single thought. The top 3 Tweets in each class are posted on the Twitter board for the rest of the day. #Hashtag Mania is used as a closing activity in which students create a saying or slogan that represents their learning from the day’s lesson. This is a unique way for students to have ownership in their learning, as well as demonstrate creativity. The top 4 hashtags from each block are placed on the #Hashtag Mania board for the rest of the day. The use of Twitter and #Hashtag Mania are quick and effective ways to incorporate social media formats in the classroom where time or access to technology may be limited.

^Katherine Babineau
Mentor: Suzanne Carpenter, Chemistry & Physics

Richard Wallace, College of Science and Tech.

Optimizing Sustainable Fertilization Methods for Moringa oleifera

There is evidence that the Moringa oleifera tree, known to some as the “Miracle Tree”, has a plethora of health and environmental benefits. M. oleifera is currently being grown in poor countries like Ghana and Haiti to aid in the fight against malnutrition, however, without background knowledge of how to maintain M. oleifera, these efforts may be useless. In order to make the cultivation of this tree a widespread and simple process, as well as cost effective to poor farmers, research on the behavior of this plant under natural fertilization methods is required. This research project will monitor the growth of the M. oleifera tree under a series of different fertilizer levels as well as with two different natural fertilization methods: worm castings and fish meal.

*Rachel Bass
Mentor: Michael Tiemeyer, Math

Four-cycle Factorizations with Two Associate Classes

**Alex Beebe
Greg Brackett
Jennifer Davis
Ly Tran
Mentors: George Davies, Physical Therapy
Bryan Riemann, Health Sciences
David Lake, Physical Therapy
Nancy Henderson, Physical Therapy
The Effectiveness of Low Volume Versus Very Low Volume Upper Extremity Plyo Exercises on Shoulder Performance

**Purpose:** Plyometrics (PLYO) are integrated into advanced phases of rehabilitation to increase power. Extensive research on lower extremities exists; there is limited evidence on upper extremity (UE) PLYO, specifically recommendations for minimum effective dose. Two previous studies investigated minimum PLYO volume for effective dose. Arnsdorff et al., found improvements in both high and moderate volume PLYO groups, but no difference between groups. Holzwarth et al., examined moderate and low PLOYO volumes and showed similar results with both groups making significant improvements but no differences between the groups. The purpose was to investigate PLYO dosage by training subjects at low and very low volumes with a control group. **Methods:** Sixty-five physically active subjects, aged 18-30 years, volunteered to participate. Participants were randomly allocated to 3 groups: low volume, very low volume, or control. Closed Chain Upper Extremity Stability Test (CKCUEST), Underkoeffler Overhand Softball Throw (UKOT), baseball throwing velocity, single arm seated shot put throw, isokinetic time to peak torque, and peak torque were assessed pre and post training. The low and very low volume groups trained twice a week for 8 weeks. The training comprised of 7 UE PLYO exercises. **Results:** Two-way repeated measures ANOVA revealed no significant difference between groups for any dependent variables. Significant improvement within subjects existed for CKCUEST: (F=4.972, p=.012) and the UKOT (F=7.357, p=.010). No significant differences existed with the other measures. **Conclusion:** The results demonstrated similar gains in PLYO training of low, very low, and control group in regards to all outcome measures.

Tyler Blake  
Mentor: Allison Belzer, History

**Dynamic Duo: Washington and Lafayette**

Lafayette is a well-known historical figure for his role in the French Revolution, but his pertinence to our own American Revolution is relatively unfamiliar. His relationship with George Washington is unimaginably deep and deserves a bigger place in our history books. The research paper outline three key roles Lafayette played in our independence as a result of the bond between General Washington and himself. First, his unwavering morale support. Followed by the vast amount of economic support Lafayette committed. Finally his loyalty itself can be credited with the eventual capture of the British’s most important general, Cornwallis.

^Ayana Brown  
Mentor: Barbara Fertig, History

**Preserving Oral History**

I will be presenting a powerpoint about the research I've done with Dr. Barbara Fertig. The bane of our project is about preserving the research based in oral history that she has collected over the years; specifically in regions of Connecticut and a region in Savannah, called Pinpoint. Through the incorporation of slides of art and audio recordings, I will explain each region and how they thrive off of this center of art.

*Michelle Burghardt  
Mentor: Michael Toma, Economics

**Economic Trends 2015: The Drivers of Metro Savannah's Economy**
The presentation is based on research that I conducted with Dr. Toma and the Center for Regional Analysis for the Economic Trends document, which is published annually by the Savannah Area Chamber of Commerce. The main focus lies on the Drivers of Metro Savannah’s Economy- Manufacturing, the Ports, Tourism, Health Services, Military, and Real Estate. While many major cities’ economies are still faced with problems evoked by the recession, metro Savannah’s economy experienced rapid growth in 2014. Over the course of the year it slowed down enough to be sustainable for a prolonged period of time while still being above average. By looking at data from 2013 and 2014, I will explain how Savannah’s economy benefits from its diversity and how positive developments in all of the five sectors make for an optimistic outlook for 2015. Additionally, I will outline the methodology of my research and putting together the Economic Trends magazine.

^Ben Callahan
Mentor: Aaron Schrey, Biology

Differences in DNA Methylation among Kenyan House Sparrows

The house sparrow, Passer domesticus, is a hardy and versatile organism and one of the world’s most successful introduced species. Because introduced species are moved around in very short time intervals, they may not follow typical evolutionary phenomenon. Therefore, it is possible that epigenetic mechanisms, such as DNA methylation, play a role in dictating the phenotype of the house sparrows in introduced locations. We have access to samples from different regions of introduced house sparrows and will test them for different methylation patterns via bisulfite sequencing. We will target house sparrows from six locations. Three of these sites are from the range extremes (Wajir, Marsabit, Garissa) while three of these sites are from locations with longer established house sparrow populations (Mombasa, Nairobi, and Voi). We know that differences exist in the expression of the TLR4 gene for birds among these locations. We will compare the samples to determine if there are different methylation patterns among the introduced regions that explain the differences in gene expression.

*Maggie Carson
Mentor: Jonathan Roberts, Psychology
George Lantzounis, Career Services
Allison Lyon, Career Services
Jennifer Rushton, Athletic Department

Career Development in Student Athletes

The focus of this study was to find out how ”career ready” student athletes currently feel. This information will then be used to cater future career service events to the specific needs of the student athletes. Our study consisted of 121 athletes at Armstrong State University. Each student athlete was administered a pencil and paper self assessment test on various career development themes. Student athletes simply had to rank from 1-5 how comfortable they felt at each statement listed on the survey. Each statement related back to different areas of the career development process ranging from choosing a major to finding a job. Results showed that there were some areas that the student athletes felt extremely comfortable with and others they were not. For example, average scores of areas of choosing a major was 4.23, dressing professionally was 4.52 and filling out a job application was 4.27. However student athletes were less certain in the areas of creating a cover lettering at 3.53, applying for graduate school at 3.19, knowing what LinkedIn is at 3.35 and knowing how to access resources and counseling from career services at
3.55. Data from this research project, while not statistically significant, aids in the future partnership of Career Services and Athletics in preparing Student Athletes for graduation.

**Jarvis Dean
Mentor: Deborah Jamieson, AMT

_The Rebirth of Afrofuturism_

During the Harlem Renaissance, African-Americans were concerned with the “New Negro”, the black identity of African-Americans, hoping to “re-present” themselves in new, progressive ways, either in the areas of politics or in culture (literary or visual works). The Harlem Renaissance was a movement from the old Negro, the plantation slave, to the “New Negro” and focused on providing a more refined, urbane and sophisticated identity of blacks centered on their contributions to the creative culture of Americans. Starting in the 1920s, this movement was seen as the start to black consciousness. In contemporary art, there has been an abundance of art centered an aesthetic defined as Afrofuturism. Afrofuturism is a literary and cultural aesthetic that encompasses historical fiction, fantasy, magical realism and myth. It draws upon non-Western cosmologies to interrogate and critique current conditions of Blacks and other people of color and to examine the past and envision different futures. Stemming from the Black Arts Movement, Afrofuturism is today what Harlem Renaissance was yesterday. It is important to chart the evolution of art genres to see how they came about and what could possibly occur in the future. By focusing on David Huffman’s “MLK”, Jean-Michel Basquiat’s “Molasses”, and Sanford Biggers’s “Vex”, the afrofuturist aesthetics can be clearly identified. Compared with works by Harlem Renaissance artists Lois Mailou Jones and Aaron Douglas an evolution of Black Art is evidenced.

^Julianna Delgado
Mentor: Nancy Tille-Victorica, Spanish

_Dos cuentistas mexicanas denuncian los estereotipos de género_

Rosario Castellanos y Elena Poniatowska son dos de las escritoras mexicanas más importantes del siglo XX y sus obras han sido celebradas por retratar y denunciar la marginalización de la mujer mexicana y latinoamericana. En este trabajo voy a analizar la representación de los papeles de géneros en dos cuentos: “Lección de cocina” (1971) de Castellanos y “De noche vienes” (1979) de Poniatowska. Voy a revelar y comparar la manera en que las protagonistas principales de estos cuentos denuncian y resisten la manera de pensar, sentirse, y comportarse que la sociedad mexicana les impone, específicamente en el matrimonio y durante los años sesenta y setenta. También, voy a examinar brevemente cómo la situación de la mujer mexicana ha cambiado desde la publicación de estos cuentos.

^David Denison
Mentor: Michael Toma, Economics

_For-Profit Schools and Student Loan Default Rates_

Student loan default rates should be carefully examined especially if the loans are federally guaranteed with taxpayer money. For-profit education has been studied for decades, and has been found on average to have higher tuition cost, and lower graduation rates. Much of the research thus far can be divided into those focusing on institutional characteristics or student characteristics. This study, falling into the former category, uses data from the U.S. Department of Education and the National Center for Education Statistics on over 1900 schools to provide
evidence that for-profit schools have higher student loan default rates than public or private not-for-profit school.

Chelsey Drinkard
Rebecca Brown
Mentor: Emily Grundstad-Hall, AMT

*Fanny Mendelssohn: A biographical and compositional study*

Fanny Mendelssohn Hensel was an incredible Romantic Era composer. Because she was a woman, her family did not believe that it was her place to publish her works—at least not under her own name. Her brother, Felix Mendelssohn Bartholdy, published some of her works along with his own. Because many of her works were under Felix’s name, and because she only published one composition under her own name during her lifetime, Fanny has only recently become recognized as a composer in her own right. Many people today have misconceptions about Fanny, believing that she was deprived of happiness because she was unable to publish here beautiful music, but that is not true. Fanny had a wonderful life. She loved her opportunities to play and compose music, but she also loved the role she played as a wife and a mother.

^David Dukes
Mentor: Aaron Schrey, Biology

*The Role of Epigenetics in the House Sparrow’s Invasion of Kenya*

My research project will use various genetic and epigenetic laboratory techniques on Kenyan house sparrows in order to answer questions about ecological epigenetics and population genetics relevant to invasive species. House sparrows are one of the world’s most broadly distributed vertebrate species. They have successfully invaded areas outside of their native range on nearly every continent. Of particular interest is their invasion of Kenya, because it has occurred in the past 60 years. In this case, we’re attempting to answer questions relating to population structure and the differentiation in DNA methylation that may have contributed to known differences in phenotype post introduction in Kenya. I will use these techniques: bisulfite conversion of house sparrow genes of interest, methylation-dependent immunoprecipitation prior to next-generation sequencing to identify methylation states of genes on a broader scale, and several statistical techniques such as AMOVA and genome-to-genome comparisons to elucidate population structure and potentially identifying roles of specific genes in regard to phenotype.

*Angela Edwards
Mentor: Karen Hollinger, LLP

*Subversive Masculinity in the Screen Image of Montgomery Clift*

In the late 1940s and 1950s, Montgomery Clift arose to become of the most iconic actors of his generation. Expressing a profound sensitivity and complex inner life in his performances, he helped to transform screen representations of masculinity, which had been defined in many leading men through ideals of stoicism, aggression, and self-assurance. Clift retained the traditional status of a romantic matinee idol, but his naturalistic screen persona and the discourse surrounding it represented a radical break with old conventions. The lack of self-definition in most of his characters - enhanced by his consistently ambiguous, thoughtful performance style - reflects the uncertainties of a post-war generation on the verge of a radical cultural shift.

**Daniel Erickson
The Effects of Isolated Joint vs. Multiple Joint Training on the Shoulder: A Pilot Study

Statement: Several studies have demonstrated the effectiveness of performing isolated or multiple joint exercises for improving shoulder performance; however, research comparing the two interventions has not been performed. The purpose was to investigate Closed Kinetic Chain (CKC) multi joint or Open Kinetic Chain (OKC) isolated joint exercises and the effects on selected shoulder outcomes. We hypothesized similar outcome improvements between both training interventions. Methods: This was a quasi experimental study design. 52 healthy college students (11 males, 41 females), ages 19-38 years, volunteered and met inclusion criteria. Outcome measures included: 10 Rep Max bench press, CKC upper extremity stability test, seated shot-put, Biodex isometric serratus anterior strength, triceps hand held dynamometry, isokinetic peak torque internal rotation at 60, 180, 300 and CKC press peak force at 120, 210, 300 degrees/second. Subjects were randomly assigned to two groups, one performed 3 sets of 10 bench press; second performed 3 sets of 10: serratus anterior punch, triceps extension and chest fly. Subjects started at 70% of 1 RM and increased 3% per week for 8 weeks. Non-compliant subjects were used as a control. Results: One Way MANOVA (IR and CKC peak torque) and Repeated Two-Way ANOVA testing (time and groups) revealed significant improvements within groups; but no significant differences between groups. Conclusions: Results suggest that multi and isolated joint training produce similar results for all outcome measures. The results have application to rehabilitation, strength and conditioning, and performance enhancement programs, where both modes of exercises are effective in improving shoulder strength.

Blind Orientation to Environmental Geometry

There has been a lot of work done on evaluating the theoretical accounts of spatial learning and orientation of environmental geometry. To date there are two primary theories; the associative based account and the information, or Bayesian, based accounts. Research is being done to compare environmental geometry learning by touch to that of learning by vision. This experiment focused on the processes involved in the learning and the utilization of landmarks along with environmental geometry information during reorientation while utilizing a different sensory modality than what has been previously researched. This study modified a previous experiment conducted by Sturz and Kelly (2013), which focused on the utilization of features and geometry during spatial orientation with vision. This study had blind-folded human participants search for a target object hidden in one of four locations. Each location was marked by distinctive textural cues in the corners of a rectangular enclosure. After training, three of the textural cues were replaced with the identical novel texture and one non-reinforced texture remained. The one remaining texture was randomized between the short, long, and diagonal position from the trained corner. The results of this study are compared with the predictions.
obtained from the two previously mentioned theories of spatial learning. This current study will also compare the obtained results with results of previous studies testing with vision.

**Tatiana Eversley  
Daniel Mauck  
Mentor: David Adams, Health Sciences**

_A Critique of Ebola Preparedness of a Level One Trauma Center in Southeast Georgia_

The Ebola Virus was first discovered in Africa in 1976. Since that time, more than twenty outbreaks have been reported worldwide. We are currently in the middle of the worst epidemic caused by Ebola on record. Many patients will seek care at a hospital that may not be equipped for the high level of vigilance that is required. The World Health Organization (WHO) and Centers for Disease Control and Prevention (CDC) publish guidelines for caring for an Ebola infected individual. These guidelines, along with the efforts of healthcare workers, are helping to contain the infection and prevent further spread. This presentation will examine the treatment protocols for handling an Ebola patient at a level one trauma center located in Southeast Georgia for preparedness and readiness to treat and contain the infection. Additionally, the guidelines of the hospital will be compared to the guidelines of the WHO and CDC to evaluate proper use.

^Justin Farquhar  
Mentor: Yassaman Saadatmand, Economics


There exists a substantial body of literature on the effects of Globalization on the poor populations of the world, (Hall and Bass 2010, Tran 2010, Harrison and McMillan 2006) but little exists on the effects of globalization on the rich. The model presented here serves to provide some insight into this other spectrum of the effects of globalization. The results indicate that, while economic and cultural globalization increase the income share held by the top twenty-percent of income earners, political globalization and restrictions to globalization decrease the income share held by this quintile.

**Lindsay Freeman  
Mentor: Regina Rahimi, Early Childhood Education**

_Overcoming the Stigma of Special Education_

In a philosophical sense, current special education programs in public schools give people with disabilities a chance to enrich their lives through individualized education. However, the reality is that the stigma of this label can be detrimental to the success of students with disabilities. One of the prominent flaws in American culture is that anything that deviates from dominant cultural norms has a negative stigma attached to it. People with disabilities are a part of this deviation and have experienced oppression and unfair treatment throughout our nation’s history. These issues are prevalent today. Special education students are exposed to bullying from teachers and peers, lowered expectations in the classroom, and parental support barriers. Through valid research, I examine these social and cultural issues, discuss their implications on education, and provide recommendations for future action. Unfortunately, we are far from reaching that perfect vision of what special education is meant to be. The general shame that is associated with having a disability is prevalent and will take a multidimensional approach to remedy. Until we overcome the stigma as a society, our jobs as educators will be challenging as
we face the consequences of this stigma with our students. This support will hopefully instill the persistence needed by every student to succeed in American education.

Leandra Gamble  
Mentor: Amy Potter, Geography  
"The Walking Dead" Wakes Up Tourism in Senoia, GA: Exploring a Fictional Landscape  
Nicknamed “Little Hollywood,” Senoia, Georgia has undergone tremendous transformation over the last several decades, as it has become the desired filming backdrop for the television and movie industry (Highbeam Business 2013). Building on scholarship in movie tourism (Kim 2012; Pan and Ryan 2013; Busby and Klug 2001) and particularly the research in geography centered on literary tourism (DeLyser 2003) we seek to draw out how Senoia is a fictional landscape. This paper will explore the importance of the filming industry and how it has altered the economy of a town with a population of 3,500 people. Utilizing various research methods, which include archival research and semi-structured interviews, we will discuss the goals of the entertainment industry and how it has impacted not only local residents but also place itself. We will then highlight the recent developments of Riverwood Studios, the emergent tourism industry resulting from the highest rated TV series in drama, *The Walking Dead*, as well as the cultural collision that often occurs from the rapid changes occurring there.

Ashley Gholston  
Mentor: Amy Potter, Geography  
Reflections on the River Road: Undergraduate Research on Southern Plantations  
Over the last year I have served as an undergraduate research assistant on a National Science Foundation funded grant that explores plantations as racialized heritage landscapes. Tourists will often view plantations in the South as important symbols of the region’s history. Since plantation museums are one of the main ways people learn about Southern history, it is important to take into consideration the narrative that is being presented to tourists. In my presentation I will discuss my experience as a research assistant, particularly my time in the field conducting research in Southern Louisiana in March of 2015. In the field, I was involved in a number of data collection methods including participant observations, tourist surveys and interviews, and tour guide interviews at Oak Alley, Whitney, and Laura Plantation. Based on my participation in this research, I will conclude with my own future research prospects utilizing GIS data.

Eric Gigli  
Mentor: Aaron Schrey, Biology  
Next-Generation Sequencing of Juvenile Red Drum (*Sciaenops ocellatus*) Exhibiting Visible Trait Variances  
Red Drum are among the most popular inshore saltwater species from North Carolina to Texas as a strong fighting fish and as delicious table fare. Because of their popularity, they also have a history of overfishing, drastic regulatory measures, and recent population resurgence. Despite the importance of this fishery, there is still little genetic information available outside of aquaculture. Typically the fish has silvery-white pigmentation on the ventral side and coppery-red pigmentation on the dorsal side. It is from this pigmentation that the fish gained its namesake. The species is primarily identifiable by a single, circular black spot on each side of the fish, near the base of the tail. While the most common occurrence is a single spot on each
side of the tail, there are frequent cases of individuals with more than one spot on each side. In
the cases of multiple spots, the location of spots is highly erratic. There are also rare instances of
individuals without spots. Our goal is to compare DNA sequences of Red Drum individuals
using next generation sequencing. We will screen 32 individuals (17 with a single tail spot, 14
with multiple tail spots, and 1 with no tail spot). Red Drum samples were collected from late
September 2014 to late October 2014. Individuals were obtained from the population local to
Wilmington River and Ossabow Sound. All fish were obtained according to Georgia regulations.

*Joey Grasso

Easy VZ: Making Cloud Computing Accessible

Primitive forms of the Internet had existed for over twenty years until the World Wide
Web allowed the Internet to change the world. It was not until the introduction of the web
browser that the internet found its place in everyone’s home. Today a similar movement is taking
place, but this time it is with Cloud Computing. In its present form, Cloud Computing is simply
immediate access to technology resources delivered dynamically as a service. One of the
technologies making cloud computing possible is OpenVZ. However just like the internet was in
the early 1990s, OpenVZ is missing the equivalent of a web browser to make it user friendly.
OpenVZ commands are tedious and executed through a terminal or command prompt. The
solution is a web based dashboard called Easy VZ. The dashboard was constructed using widely
used and freely available software. By adopting a simple user interface design, anyone familiar
with email or using Facebook will be able to manage their own Cloud infrastructure. With
minimal cost and experience an individual, business, or organization will now be able to utilize
the same technology and software that was once only available to enterprise level organization.

*^Berkley Griffin
Mentor: Sarah Gray, Chemistry and Physics

Development of Inexpensive CO₂ Sensors for Gas Flux Analyses in Aquatic Coastal Ecosystems

CO₂ fluxes in marshland areas are dynamic seasonally, daily, and even hourly; in order to
accurately model the global CO₂ cycle and predict future climate changes, more data detailing
the air/ocean CO₂ gas exchanges are needed. In this work, inexpensive industrial CO₂ sensors
using infrared (IR) technology are being adapted as in situ instruments for field work. In-situ
sensors collect more frequent data, save measurement time, and are more cost-effective than
collecting field samples to run in a laboratory. Calibration methods have been carried out to
ensure all sensors read accurately and with reproducible data. Initial field tests have been carried
out in a Savannah, GA marsh. Future work will include programming open-source Arduino
boards to control the sensors according to a real-time clock. In addition, a housing module is
being developed to enable each sensor to retrieve fresh air between samples while still being
protected from the environment.

^John Haddock
Mentor: Brandon Quillian, Chemistry and Physics

Synthesis, Reactivity and Structure of Novel Heteroscorpionate Ligands

Our area of research has been in the synthesis of novel ligands specifically
heteroscorpionate ligands, which have been of interest in the study of coordination chemistry.
This ligand class is of special interest, as the organic scaffolding can possess a variety of electron
donating groups that can be used to coordinate metals, which allows control and alteration of the 
electronic properties and reactivity of these transition metal complexes. These types of 
complexes have potential catalysis applications. We have been conducting research into using 
poly-thiomidazolyl acetates on transition metals to form new complexes. Our group’s primary 
area of study began with using the bis-thiomidazolyl acetate as a ligand for binding with various 
transition metals to determine reactivity and structural identity. Initially, our first attempt to 
produce this compound resulted in the much more fully studied bis-thiomidazolyl methane, as 
we discovered that the acetate underwent decarboxylation at higher temperatures. Further 
experimentation at lower temperatures resulted in creation of the bis-thiomidazolyl ligand, but 
with the sulfur, rather than the nitrogen, bound to the free carbon of the acetate. Currently we are 
also looking at using bis-thiomidazolylpropanone rather than acetate. We are extending these 
studies to 1,4,5-trimethylimidazole-2-thiol in an effort to test substrate scope. These compound 
were characterized by 1H NMR, IR and single crystal X-ray crystallography

**Anna Hayes  
Jessica Headrick  
Tony Huggins  
Christina Maher  
Brittany Sikes

Mentors: Anne Thompson, Physical Therapy  
AndiBeth Mincer, Physical Therapy  
Nancy Henderson, Physical Therapy  
Kathleen Schaefer, Physical Therapy

A Comparison of Conservative Treatments for Plantar Fasciitis

Objective: Compare the effectiveness of a five-week course of treatment of iontophoresis 
versus manual therapy, both in conjunction with a common therapeutic exercise protocol, on 
improving pain and function in subjects diagnosed with plantar fasciitis. Background: There is 
inconclusive evidence to establish a favorable treatment strategy for plantar fasciitis and a lack of 
evidence supporting long-term effects. Methods: Subjects who presented with plantar heel pain 
for at least one month were evaluated and those who were diagnosed with plantar fasciitis 
completed subjective reports on pain and function using the NPRS and LEFS as primary 
outcomes. Thirty-two subjects were randomly selected to receive either electrotherapy with 
exercise (n= 15) or manual therapy with exercise (n=17). Each group received 10 therapy 
sessions over the course of five weeks (approximately two sessions per week). The NPRS and 
LEFS were assessed following the sixth and tenth visit, and at four-week follow-up and analyzed 
using repeated measures analysis of variance. Results: Both groups showed statistically 
significant improvements in pain and function from baseline to visit six and from visit six to visit 
10 (p< 0.05). There were no further improvements between visit 10 and four-week follow-up. 
There was no difference between groups for any outcome at any measurement point.  
Conclusion: The results show that electrotherapy and manual therapy are equally effective in 
treating patients with plantar fasciitis. The current study also demonstrates that a course of 10 
treatments provides better outcomes than a course of 6 treatments.

^Jeremy Haynes  
Mentors: Nancy McCarley, Psychology  
Joshua Williams, Psychology
Examining Relevant Information in Students’ Notes Recorded During and After a Lecture

In this analysis, we reviewed notes from a previous study (Williams et. al, 2013) which examined the encoding and external storage functions of note taking in college students. We analyzed the notes for trends in note taking based on total word counts, relevant and irrelevant word counts, and relevant to total word count ratios (relevance ratios). Further analyses included dividing participants based on high or low relevance ratios and classifying participants as passing or failing a retention quiz. Based on comparisons of relevance ratios with participants’ notes, results indicate that the timing of note taking, specifically taking notes during a lecture and taking notes after a lecture, impacts the type of information recorded from a lecture and, in turn, may impact retention of information. Also, comparisons of note takers’ relevance ratios to the relevance ratio of the instructor’s PowerPoint revealed that overall, participants noted significantly less relevant information than what was available in the PowerPoint, which again, may impact retention of information. This suggests that it may be beneficial for students to modify what needs to be noted as relevant and irrelevant during a lecture presentation in order to improve academic performance.

**Asher Henry**  
Matthew Motes  
Sarah Roberts  
Mentors: George Davies, Physical Therapy  
Nancy Wofford, Physical Therapy  
Bryan Riemann, Health Sciences

Scientific Basis Underlying Shoulder Exercises: Concentric, Eccentric, Ballistic, and Plyometrics

Various shoulder exercises have demonstrated improvements in power production and functional performance of overhead sports. Research is limited in contrasting modes of exercise for shoulder internal rotators (IR). The purpose was to determine the training effects of concentric (con), eccentric (ecc), ballistic (ball), and plyometrics (plyo) exercises of the shoulder IR. The researchers hypothesized using plyometric exercises would produce greater outcomes in power production. **Methods:** Sixty-eight physically active subjects, ages 18-30, were randomized into four training groups: con, ecc, ball, and plyo. Subjects trained twice a week for eight weeks in a graded progression. The Biodex measured pre/post-test peak torque (PT) and average power (AP) at velocities of 60, 180, and 300˚/s. Baseball throwing velocity was measured by a radar gun. PT and AP variables were tested using multivariate procedures while velocity was tested using univariate measures. **Results:** Pre-post within group significance was shown for PT at 180˚/s (P=.000) and 300˚/s (P=.003). Between group significance was found for PT at 180˚/s (P=.004) and post-hoc testing demonstrated significant difference between con and ecc groups (P=.002). AP and throwing velocity showed no within or between group differences. **Conclusion** This study compared con, ecc, ball, and plyo exercises of shoulder IR. Findings demonstrated significant pre-post gains for PT at 180 and 300˚/s. Between group differences showed significant improvement in ecc compared to con in PT at 180˚/s. Our results did not support the hypothesis. Based on the results of this study, to increase PT the most effective mode was ecc training.

**Briauna Hill**  
Mentor: Sara Plaspohl, Health Sciences
Socioeconomic Issues are the Catalyst for Rising HIV Rates in the South

Socioeconomic issues in the South are the main catalyst for the astounding HIV/AIDS rates in the past thirty years. The correlation between poverty and HIV trends show globally, as well as, in the United States, especially in the South. Poverty prevents individuals from accessing with more families living at or below the federal poverty level, and the lowest median income rates in the nation. States in the Southern United States have the highest percentage of new HIV diagnosis and the highest percentage of individuals dying from AIDS. The perfect storm of socioeconomic factors and lack of funding have created the South as the new epicenter for HIV.

Gena Hoopaugh  
Mentor: Lara Wessel, CJSPS

Military Bases and Their Effects on the Economy

Military bases have had a long history linked to the economy of the United States. This paper researches multiple military bases and explains exactly how much impact these military bases have on the economy. It discusses the employment opportunities brought by the presence of military bases and how these opportunities increase or decrease the employment rates of the area. The paper also discusses the effects military bases have on the incomes of the residents that live in the immediate area of the bases. This paper also gives insight on what the government does with the property that once was a military base after it has been closed. This information is important, especially for the Savannah area, because there are two major military bases located within an hour of Savannah and many within the state of Georgia.

David Hoover  
Mentor: Michael Toma, Economics
Yassaman Saadatmand, Economics

Gender Effects on Voting Behavior in the Indian Polity

Despite its status as a developing country, India has drawn worldwide attention for its well organized system of democratic elections. At 1.2 billion citizens, India is the world’s largest democracy. However, western attention has also fallen upon India in recent years over sexual assault cases and systemic misogyny. In this paper, we examine voter participation and behavior with a focus on gender. Three years of elections to India’s state legislative assemblies from years 2010-2012 are examined. Women are found to vote more often than men, and though only 6.5% of candidates were women, areas in which more women were on the ballot received a greater percentage of votes after controlling for party, age, and the number of competitors. In addition, the availability information and economic opportunity costs, which disproportionately affect women - are found to have a significant impact upon voter turnout.

Matthew Hunt  
Mentor: Nalanda Roy, CJSPS

The Future of Sino-Russian Relation’s and their Potential Impact On American Foreign Policy

This paper describes how the future deepening of Chinese-Russian relation’s would impact American Foreign Policy. By examining the geopolitical partnership between China and Russia since the year 2000, along with their shared interests (Russian energy fueling the Chinese labor/manufacturing industry) the nature of their relationship and its future prospects can be examined thoroughly. Both countries are premier military powers and have robust economic
sectors that grant them significant sway in altering and determining the course of global affairs. The United States has actively and mostly with success tried to maintain stable relations with both countries in this significant trilateral relationship. Since the beginning of the 21st century though, the U.S. has shown greater cooperation with the Chinese on political, economic, and social issues all the while distancing themselves and taking a harder stance with what they see as a hyper-aggressive Russia that has an eye on reclaiming its past glory. Both countries have clashed with the United States over territorial disputes in different parts of the world, which has become a focal point used by both countries to strengthen their relationship. Their benefiting from each other’s political and economic assets along with cooperation opportunities that have and may continue to prove to be mutually beneficial to both countries may lead to a stronger Sino-Russian relationship. Stronger Sino-Russian relations would negatively affect U.S. foreign policy.

**Marini Jackson
Mentor: Patricia Holt, Adolescent and Adult Education

Interview with an Adult Learner

The needs of adult learners can be very diverse at various stages of life. In young adulthood, much of the learning tends to be of a vocational and liberal orientation, where one learns various life skills. As adults grow older and have an increased life expectancy, there are greater learning needs. Findings indicate that the older adult population are encouraged to “get out and do something that is unfamiliar and mentally challenging, and that provides broad stimulation mentally and socially” (Porter, 2013). This paper tells of my mother, Florence Jackson, an adult in her mid-sixties who has had an ability to learn quickly and easily and teaches others. Her education related vocational experiences enable her to teach others. My mother’s activities such as sewing enabled her memory to be very sharp and attentive during her later adult years. Florence Jackson retired from the workforce in August 2013 after having a mild stroke in March 2013. As a result of the stroke, her cognitive skills, memory, and ability to learn new things have been affected. Since having the stroke, my mother has made various positive strides in her recovery. Through personal determination, my mother has now regained strength and mobility in the right side of her body and other effects are minimal. In addition, she has made strides such as volunteering, exercising, as well as making diet and lifestyle changes, which enable her to live a more fulfilling life.

^Thomas Kavoori
Mentor: Dennis Barber, Economics

Effects of the ACA on self-employment

A high percentage of the uninsured population is self-employed which have not had access to affordable health insurance. The Affordable Care Act (ACA), passed in 2010, intends to increase access to affordable health insurance for all in order to get more people covered. Additionally, some expect the policy to encourage more people to become self-employed by decreasing the cost and difficulty of being covered, thereby liberating many from the need to remain employed in larger businesses which provide coverage as a benefit or at a lower price. To verify the above mentioned intentions and expectations of the effects of the ACA on the self-employed, this paper addresses two particular questions: 1) Did access to the health exchanges which were made available in 2013, whether federal or state, increase the private insurance take-up rates among the self-employed and 2) Did the Affordable Care Act increase participation in
self-employment? To answer these questions, a difference-in-difference model is constructed and used to analyze data from the March Supplement of the Current Population Survey from 2013 and 2014. The results suggest that 1) the ACA has not increased the likelihood that a self-employed person would be covered by a privately purchased plan and 2) participation in self-employment did not increase due to having access to the health care exchanges.

^Abraham Ladha
Mentor: Patricia Brown, Math

Exploring A Derivation of the n-queens Problem

In our research, we study a game derived from the classic n-queens problem. In the original statement of this problem, a player tried to place n queens on an $n \times n$ chessboard such that no queen could attack another. In this derivation, we relax the conditions of attack as follows: If the number of queens attacking a non-occupied square modulo 2 ≠ 0, a new queen can be placed in that square, else if the number of queens modulo 2 = 1, the square is forbidden. Now, not only does the position of the queens matter, but also the order of placement. Some solutions will “lock” the board with less than $n^2$ queens placed on the board, and with every non-occupied square unable to host an additional queen. Our goal is to determine the relationship between “locked” solutions, complete solutions and n. We can form decision trees to determine every single possibility, but due to symmetry, some solutions are completely identical. By changing traditional tree notation, to one where branches are given the possibility to recombine, we get a much smaller and more visually understandable diagram. As n increases, the time it takes for a computer to fully solve a board for that n increases exponentially. We will provide justification of estimated bounds of complexity.

John Morgan Lamb
Brittany House

Mentors: Dr. Ronald E. Garner, Mercer University School of Medicine

Stimulations of HEK293TLR4 Cells with Fractionated Proteomannan Leads to the Detection of an Inhibiting Component

*C. albicans* is a common commensal organism that can invade the mucosal layer of an immunocompromised host and cause candidiasis. This pathogen expresses immunologically active N- and O-linked glycosylated cell wall proteins that are otherwise called mannan. The N-linked mannan is recognized by mannose-receptors while the O-linked mannan is recognized by a pattern of recognition receptors know as toll-like receptor (TLR-4). Interactions between TLR-4 and mannan generates a second signal that activates various cells. This NFkB signal directs cytokine gene transcription. Proteomannans derived from *C. albicans* have been shown by others to both induce and inhibit this cytokine production. We hypothesized that the mannan preparations contain both inhibitory and stimulatory factors. We proposed to separate these factors using column chromatography. Using ion-exchange and size exclusion chromatography the fractionated mannan was further separated into multiple components. The components were then assayed for carbohydrate and amino acid content. The identities of the mannan components were further assessed by polyacrylamide gel electrophoresis. When assessed in a TLR-4 dependent cell model, both stimulatory and inhibitory activities were identified. These findings suggest that the TLR-4 response to *C. albicans* mannan may be controlled by a ratio of competing ligands that are released from the fungal cells.
What are the effects of state level regulations on the number of breweries in a given state? The intuitive answer is that more strict regulations lead to a lower number of breweries. However, this is not always the case. In this paper, the effects of various state-level regulations are compared to the number of breweries per capita in a state using multivariate regression. The findings are that states with higher state level excise taxes actually have higher numbers of breweries per capita. Also, whether or not a state allows manufacturers to fill growlers (32-64 oz. plastic or glass containers) for individuals to take home has a strongly significant positive effect on the number of breweries. Public policy implications for the results are discussed as well.

*Krystal McGuire  
Mentor: Beth Howells, LLP  
*Which Witch is Which?: Magic and Power is Shakespeare's The Tempest*  
In Shakespeare’s The Tempest, the character Prospero uses the obvious differences of race, gender, and economic status to legitimize his subjugation of Ariel and Caliban and his colonization of the island. Despite being deprived of any speaking roles within the play, Caliban’s mother Sycorax is viewed through Prospero’s European eyes the same way the Native Americans were viewed by early European colonizers, as pagan-like demon-worshipers. However, the “colonizer” Prospero has a major flaw in common with the “colonized” Sycorax that devalues his argument of superiority: magic. The purpose of my argument is to posit that the legitimacy of the colonialist project in the New World is subverted by the deterioration of Prospero’s sense of superiority to Sycorax through his usage of magic within Shakespeare’s The Tempest and the historical parallel of the fear and punishment of witchcraft in sixteenth century Europe.

*Jessica Mitchell  
Mentor: April Garrity, Communication Sciences & Disorders  
*Changes in Perceived Quality of Life Following the Onset of Aphasia*  
Aphasia, usually precipitated by stroke, is an acquired language impairment affecting spoken and written communication abilities. Aphasia can affect many aspects of one’s life leading to a decreased perceived quality of life (QoL) (Franzén-Dahlin et al., 2010). QoL is usually thought to be comprised of a number of domains: physical, mental, social, and emotional functioning (Franzén-Dahlin et al., 2010; Cruice et al., 2010; healthypeople.gov, n.d.). Perceived QoL is strongly tied to health outcomes (Smith et al., 1999). Cruice, et al. (2010) found that specific factors such as activities, verbal communication, body functioning, and relationships play a dominant role in perceived QoL. Garrity and Wostbrock (2012) found that QoL may improve over time as an individual adapts to living with aphasia and other consequences of stroke. The purpose of this study was to examine changes in perceived QoL after stroke using a qualitative case study design. The participant was a 66 year-old female with aphasia. Interviews that included questions focusing on factors related to her QoL were conducted in 2012 (Time 1) and in 2015 (Time 2), and then analyzed qualitatively. Results indicated that the participant identified consistent themes as contributory to her QoL at both Time 1 and Time 2. A shift in
perceived QoL was also noted, but the shift did not occur in a consistent direction. These results have implications for health professionals who interact regularly with individuals with aphasia.

Malisha Moses  
Shauntia Dyson  
Mentor: David Adams, Health Sciences

*Life in the F.A.S.T. Lane*

Life in the FAST Lane is a worksite wellness program developed to empower the employees of Savannah's Department of Public Health to improve their own health by creating an environment that encourages wellness at work. The program is currently being conducted every Monday, Wednesday and Friday to give employees the opportunity and tools to focus on nutrition, physical activity, stress management and time-management. Some of the programs recent efforts to improve wellness at work include surveys, nutritious recipes, 30-minute physical activity routines, and guidelines on how to deal with stress at work. Life in the FAST Lane plans to present at Armstrong’s 21st Annual Student Scholar Symposium to present research on developing and implementing a budget friendly worksite wellness program that will promote good health through prevention education, improve employee health status and increase engagement rates. We will be providing information on employee knowledge, behavior and productivity before, during and after the program. As well as information on what is new and what is working in the field of employee health and wellness to encourage other local employers to create a workforce that is at their healthiest.

*Megan Netherland  
Mentor: Jack Simmons, Philosophy*

*Creating an Existential Defense for Assisted Suicide*

Death, as the greatest mystery, has been an object of study for all disciplines. Philosophy, as the oldest form of pursuing truth, is not exempt from this. In order to attempt to defend assisted suicide as a personal choice I will look into the works of prominent existential philosophers. Existentialism provides the ideal avenue for this project due to its stress of individual responsibility in determining life choices. For existentialism, personal being is a problem that must be looked at individually and cannot be determined by outside forces. As such, each individual person is entirely responsible for his/her own being. Looking mainly at the writings of Jacques Derrida I will provide evidence to demonstrate how it is illogical to impose legislation on death when it is a personal choice on the position that death is an aporia which defies reason. I will also incorporate the works of Jean Paul Sartre, Søren Kierkegaard, Albert Camus, and Martin Heidegger to support this claim. This research will contribute to a larger paper that is currently underway and will be published at a later date.

Colby Newberry  
Camella McBrayer  
Mentor: Anne Katz, Childhood and Exceptional Student Education

*Infusing Community into the Classroom: Creating Meaningful Opportunities to Celebrate Student Writing beyond the Author’s Chair*

As a component of our Language Acquisition course, we read a Reading Teacher journal article entitled “Beyond the Author’s Chair” (Hall, 2014). It described instructional design
methods to support young authors in sharing their work in the classroom. Insights were provided on different research-based strategies for teachers to utilize to develop students who are poised writers. Inspired by these innovative techniques, research was conducted on additional avenues that collectively develop this theme. These include the following: writing workshop (Ralph Fletcher); methods to establish classroom community and create a positive writing environment (Montessori Teacher Training Manual and Montessori Classroom Guide); techniques used to inspire professional writers (Julia Cameron); and a study of children’s psychology. In addition, research-based writing instructional strategies presented in the article will be modeled. Students selected their preferred mode of presentation; were invited to write a story based upon items presented; writing strategies were incorporated (adding details, creating a plot, and self-editing with writing mentor charts); and students presented in whichever mode they preferred. Student interviews following this exercise yielded insights regarding whether providing choices, as the article suggests, assists with facilitating the writing process for students who are more reluctant to share their written work.

Jessica Pate
Mentor: Anne Katz, Childhood and Exceptional Student Education

Expanding the Range of Text Types in Primary Grades

This work was guided by an International Reading Association research article analysis assignment for a Language Acquisition course (Strachan, 2014). This article conveys the importance of offering primary grade students with exposure to a variety of text types and discusses research-based literacy strategies that teachers can use to deliver different text types to their students. Introducing rich and purposeful reading experiences in a range of genres will pave the way for higher education expectations. Offering primary grade students technical texts and informational text on their level gives them an ability to comprehend and analyze more complex text. The presentation will discuss how to present different text types to students who are learning the skill of cause and effect through literary, informational, and technical text types. For example, literary texts can be analyzed by selecting quotations from the book and asking students to match the cause with the effect. Technical text can be presented and discussed through the creation of charts and graphs. Informational text can be unpacked through age appropriate biographies. Empowering young students to analyze, comprehend, discuss, and write about rich and purposeful text types will introduce students to a range of knowledge for future educational purposes.

Rima Patel
Mentor: Nancy Tille-Victorica, LLP

Una denuncia de la opresión de la mujer en la obra de Rosario Ferré

La famosa escritora puertorriqueña Rosario Ferré ha dedicado una gran parte de su obra a denunciar la opresión de la mujer puertorriqueña. En esta presentación, analizo dos de sus cuentos que exploran las funciones, las normas, y las expectativas que la sociedad le impone a la mujer puertorriqueña: “La muñeca menor” y “Cuándo las mujeres quieren a los hombres” (1976). Voy a mostrar cómo Ferré representa la opresión de la mujer y la lucha por la igualdad en la sociedad puertorriqueña. Además, voy a explicar cómo la autora crítica la desigualdad de género a través del lenguaje y de las acciones de sus personajes femeninos.

Leah Perkins
Mentor: Anne Katz, Department of Childhood and Family Studies

Making reading creative: Empowering at-risk students through autobiographical scrapbook stories

This project will focus on research-based literacy strategies for assisting at-risk families and their primary grade children. Various children’s books will be discussed that showcase characters who have succeeded against the odds that they face. This will help children grow in their confidence despite their difficult circumstances and allow them to generate meaningful text-to-self connections. Additional methods will be presented to help families strengthen their literacy techniques and skills in order to help their child using Bloom’s Taxonomy as a framework. In addition, ideas for writing projects, such as a journal or scrapbook that encourages families to record personal moments through pictures and text, will be explored. This project will raise awareness of the social and academic needs of at-risk student and families. Attendees will learn the benefits of using creativity and family educational workshops to enhance students’ literacy skills.

Magyn Pietrzykowski
Mentor: Julia Cochran, Psychology

"Antichrist Superstar:" An analysis of Marilyn Manson utilizing Carl Jung's personality theory

This research paper will examine the personality of Marilyn Manson through the theory of personality derived by Carl Jung. Jung was a psychiatrist and a psychotherapist with an unconventional theory of personality. His unconventional theories led to his interest in introversion and extraversion, the collective unconscious, and archetypal symbols. Jung believed that the human psyche is naturally religious and perceptive of symbolism, and that there are various aspects that make up a single personality. Marilyn Manson is a rock star whose unconventional costumes, song lyrics, stage performances and public statements overtly express his political and religious ideologies. While Jung had a vision of God defecating on a church, and a nightmare of a large male sex organ set on display, he interpreted this to be symbolic of his subconscious feelings about religion and sex. Comparatively, Manson uses his dramatics to powerfully express his feelings towards religion and sexuality. Though generations and different means of expression separate the two, strong connections can be drawn regarding each man’s view of religious and sexual dogma. This paper concludes that Marilyn Manson, “The Antichrist Superstar,” has a complex personality that can be analyzed based on the personality theory of Jung, one of the earliest psychiatrists to address personality theory.

Patience Plair
Mentors: Robert J. Visalli, Mercer University
Melissa A. Visalli, Mercer University
Tracie Ness, Biology

Toward a Saturated Insertion Library of the Varicella-zoster Virus Portal Protein (pORF54), Varicella-Zoster Virus (VZV) is our model organism for the development of anti-herpesviral drug candidates that might be useful against VZV but also other human herpesviruses (HSV/EBV/HCMV/HHV-8). A common process in the replication of all herpesviruses is viral genomic DNA cleavage and packaging i.e. encapsidation. This process involves the processing and packaging of newly replicated viral DNA into empty, preformed viral capsids, and is essential for the formation of infectious viral particles. Current research is focused on understanding the mechanism of action (MOA) of novel VZV encapsidation inhibitors. These
small molecule inhibitors prevent the VZV portal protein (pORF54) from functioning during encapsidation. Student driven research is directed at identifying regions of pORF54 that are essential for portal structure and function. Previous work involved construction of an ORF54 insertion library. Most of the initial insertions were localized to the central portion of ORF54. A new strategy was designed to capture ORF54 insertions near the ORF54 termini. Individual library clones were screened via PCR followed by Not I digestion to identify ORF54 genes with linker insertions. The location of individual insertions was confirmed via DNA sequencing. The previous ORF54 insertion map was updated for newly confirmed insertion mutants with the goal of obtaining a saturated ORF54 library. Individual mutant ORF54 genes were recombined back into the VZV genome and VZV-ORF54 insertion mutants were assayed for viral replication and classified as either lethal or viable. Regions identified as essential for portal function/structure may be exploited to develop new antivirals that target the encapsidation process.

*Candace Poole
Cecilia Hernandez
Mentor: Scott Mateer, Biology

Characterizing substrate specificity using Loop A domain mutagenesis of YOR120w and YHR104w

Chiral alcohols are highly desirable pharmaceutical building blocks, but their synthesis from carbonyl compounds by chemical and industrial methods can be hazardous, difficult, and costly. One potential strategy to safe, easy, and cost-effective synthesis of these chiral alcohols is the reduction of keto-esters by aldo-keto reductases (AKRs). However, it is often laborious and time consuming identifying the ester/enzyme combination that produces the desired stereochemistry required for a particular medical compound. Our work seeks to explore the stereoselectivity of YHR104w and YOR120w by identifying amino acid residues that are important for substrate binding and orientation. For our analysis we have targeted residues located in the reductases’ Substrate Specificity Loop A (Loop A). The AKR YOR120w primarily produces one diasteriomic product when reducing α-Chloro-β-keto esters while the AKR YHR104w produces a different diasteriomic product. Mutagenesis of the residues of Loop A on YOR120w and YHR104w was conducted because the residues of the Loop A region of these aldo-keto reductases dictates the stereoselectivity of the enzymes. The Loop A region of YHR104w was substituted for the Loop A region in YOR120w, and the Loop A region of YOR120w was substituted for the Loop A region in YHR104w to determine if opposite chirality is observed in the reduced products of keto-ester substrates. The wildtype and mutant proteins will be expressed in bacteria as GST-chimeras, and the resulting crude lysates will be used to characterize the reduction of several keto-ester substrates.

**Clarissa Price
Mentor: Anne Katz, Childhood and Exceptional Student Education

Celebrating the Power of Language through Poetry and Creative Writing at East Broad Street School

Creative writing and poetry instruction are crucial to the development of literacy skills in elementary school students in that learning in these areas provide students with the ability to express themselves creatively in an academically rich environment. Ma’ayan (2010) notes that making room for students’ voices, literacies, and lived experiences is a “first step in…shifting schools to be successful learning spaces for all students” (p. 653-4). Similarly, Morrow (2001)
states that “poetry inspires thought” that is essential to developing an enjoyment of learning language, and as Parr and Campbell (2006) add, a “motivating factor” in the areas of “fluency, vocabulary, writing, and phonemic awareness.” Locke (2013) notes that poetry should include elements of risk-taking, experimentation, inclusion of playful language, and evidence of “pushing the boundaries of his or her writing” (p. 32). While inner-city and Title I schools receive specialized funding to close the achievement gap, particularly in the areas of literacy and mathematics, the students that attend these schools still have a deep need for creative writing and poetry enrichment. As Druian and Butler describe (2001), at-risk children often attend schools or programs with limited resources. The presentation will provide an overview of poetry and writing initiatives that I implemented in my role as a Graduate Assistant with Dr. Anne Katz. The presentation will include exemplars of students’ work and a collection of photographs to commemorate the poetry and writing endeavors of students in grades K-8 at a local, Title I elementary school during the 2013-2014 academic year.

Christian Pye  
Mentor: June Hopkin, History

The Conferences of World War II and the Robert Hopkins Photo Collection

Each of the major conferences of World War II changed Allied policy regarding belligerent nations and those nations affected by wartime actions. Robert Hopkins, son of special advisor to the president Harry Hopkins and member of the US Signal Corps, captured numerous important moments from the following conferences of World War II: Casablanca, Cairo, Tehran, Malta, Yalta, and Great Bitter Lake. By analyzing Robert Hopkins’ collection of conference photos in conjunction with primary sources, one can achieve a greater knowledge of World War II and the issues therein. My presentation will be composed of my own personal commentary combined with a PowerPoint slideshow. The slideshow will almost entirely be made of photographs with one to two slides explaining my process of work concerning the Robert Hopkins Photo Collection. Each photograph and other primary source (newspaper and occasional letter) I use will be gathered from research that I have already done for Dr. June Hopkins. The presentation will be primarily informative and light on argument.

Elizabeth Rhaney  
Mentor: Deborah Jamieson, AMT

Part 1: Activism is Sew Worth the Wait

This presentation is about the history of needlework and how the process has been used as a tool for social change. We will begin our presentation by reviewing a brief history of needlework. Then we talk about why needlework was considered a prized and respectable skill during the Middle Ages, then reduced in status by painting, sculpture and architecture during the Renaissance. Next, our presentation will focus on how the practice became gendered during the Renaissance and was linked exclusively to women and the home. Afterward, we examine the important role that needlework played in two reform movements of the nineteenth century—Abolition and Women's Suffrage. The focal point of these movements is how middle class women used their skills learned in the home to extended out into the public sphere. Our presentation then shifts to how needlework again played an important role in the Civil Rights movement of the late 1960s and the Women’s Rights movement of the 1970s. We will discuss how artists like Judy Chicago and Faith Ringgold used needlework to highlight issues of race and gender and question whether a woman should be restricted to the home. Lastly, we will
cover a recent movement called Craftivism. The movement combines crafts and needlework with activism to bring awareness to important current social issues.

*Maria Rios
Mentor: Christy Mroczek, LLP
Robert Terry, LLP

Developing a High-Impact Fact Sheet for Learning Commons

Armstrong’s Learning Commons, an extension of Lane Library, serves as a hub for academic engagement and expansion that provides access to a safe environment with tools that enhance group engagement. Many students are still uninformed about features of the Learning Commons. The purpose of the Learning Commons Fact Sheet is to highlight the essential tools available within the Learning Commons space, and it will benefit both current and prospective Armstrong students. This Fact Sheet that I have designed is intended for publication as a PDF, pending approval, on Lane Library’s website or other social media outlet. It will serve as a recruitment tool for prospective students and visitors, and it will make navigation easier for current students, faculty, and staff. Materials covered in the Fact Sheet may include the following: study rooms and their features, interactive learning tables, accolades the facility has received, “Green” features, and Studio M, an innovative group study room. This project includes a rhetorical analysis paper that expounds on my experiences creating the Fact Sheet. During my internship with Lane Library, I developed several “mock-ups”, designed through use of Microsoft Publisher. However, through my honors project and during the Publication Design course I’m taking, I’ve worked to convert these mock-ups using InDesign, a sophisticated page layout application. Drawing from my initial rudimentary designs, the InDesign software has provided the tools for creation of a fully realized and highly polished creative piece.

^Esmeralda Rivas-Torres
Brittany Smith
Julianna Edwards
Emily Flingos
Sierra Rothbarth
Mentor: Scott Mateer, Biology

Enzyme Stereoselectivity and Substrate Specificity of Aldo-Keto Reductases

We are currently working to understand enzyme stereoselectivity and substrate specificity of the model yeast reductase, YDL124w. YDL124w is a well-characterized enzyme that requires NADPH-dependent to reduce carbonyl moieties into chiral alcohols. These chiral alcohols are important building blocks in drug manufacturing. Therefore, our efforts have the potential to improve the synthesis of medicine by developing more efficient enzymes. In order to understand how YDL124w works we are currently generating a series of site-directed mutants near its active site at the F125 residue. The mutants are being created through PCR, and transformed into bacteria. Next, DNA is harvested and positive clones are selected by restriction digest screening. Digest of positive clones are confirmed by demonstrating the elimination of the PST1 site from the parental/template DNA. The following mutants have been confirmed by restriction digest: F125A, F125C, F125D, F125E, F125G, F125H, F125I, F125L, F125M, F125P, F125Q, F125R, F125S, F125T. We will verify each mutant by DNA sequencing. Once we confirm our mutants, we will then start characterizing them by looking at their ability to reduce various alpha and beta keto-esters.
Laptops and Literacy

As a part of RDEN 7071 I was instructed to create a case study with two of my colleagues. Our job was to come up with a problem, find strategies to use in the classroom for this problem, identify an implementation, and then reflect on the outcome. For one of our case studies we decided to look at the positive effects technology has on our students and their ability to learn in the classroom. The main focus of our study was the impact laptops had on literacy instruction. For one week I set my students up into two separate groups. One group had laptops and the other group had paper and pencils. The group with the laptops used the program known as Compass Learning. Students worked on reading comprehension passages and activities for a fifty minute time frame. The group with no technology worked one on one with me. I gave students printed copies of reading comprehension passages and questions. I found these passages on various websites and teacher resources from my classroom. This group also worked for a fifty minute time frame. At the end of five days each group took the same reading comprehension test on paper. I graded each paper and found the average of each group. The group with the technology had an average score of 92%. The group without technology had an average of 80%. It is obvious to see that technology had a great and positive impact on student learning.

Supernovae, Neutrinos, and SNOLAB

A core collapse supernova is a spectacular event where a star (greater than eight solar masses) explodes at the end of its life. About 99% of the energy released in a supernova is released as neutrinos. The opportunity to observe supernova neutrinos will allow researchers to test different supernova models as well as to probe the fundamental properties of the neutrino. This presentation will focus on work performed by Armstrong researchers on the SNO+ (next generation Sudbury Neutrino Observatory) and HALO (Helium And Lead Observatory) experiments at SNOLAB. The development of a supernova simulation program along with a software trigger for identifying possible supernova candidates will be presented along with SNOLAB on-site work will all be presented.

Part II Activism is Sew Worth the Wait

We will begin our presentation by reviewing a brief history of needlework. Then we talk about why needlework was considered a prized and respectable skill during the Middle Ages, then reduced in status by painting, sculpture and architecture during the Renaissance. Next, our presentation will focus on how the practice became gendered during the Renaissance and was linked exclusively to women and the home. Afterward, we examine the important role that needlework played in two reform movements of the nineteenth century—Abolition and Women's Suffrage. The focal point of these movements is how middle class women used their skills learned in the home to extended out into the public sphere. Our presentation then shifts to how needlework again played an important role in the Civil Rights movement of the late 1960s and the Women's Rights movement of the 1970s. We will discuss how artists like Judy Chicago and...
Faith Ringgold used needlework to highlight issues of race and gender and question whether a woman should be restricted to the home. Lastly, we will cover a recent movement called Craftivism. The movement combines crafts and needlework with activism to bring awareness to important current social issues.

Jennifer Savary  
Mentor: Nalanda Roy, CJSPS

Human Security in Iraq

In this paper I will analyze the major conflicts impacting Iraq’s human security. The state of Iraq is a relatively young country founded in 1921 after it declared its independence from the UK, but Iraq has a long history of conflicts and wars that occurred one after another since their independence. Every conflict that Iraq experienced resulted in a huge amount of civilian casualties among the citizens of Iraq but unfortunately only a small amount of humanitarian help during those violent wars was given to them in time of war. I will analyze and explain the decay of the economy, the government in Iraq, its struggle for peace, as well as political stability through war and oppressive rulers. Iraq has a constant struggle between the different ethnic groups and religions, especially the persecution of the minorities in Iraq. The Iraqi war and the Islamic State have been the most devastating events for the country and its citizen; many have died or fled the country, resulting in poverty, famine and homelessness throughout Iraq. The ethnic, cultural and religious diversities of the citizens created ethnic groups in constant conflict and caused the unofficial division of the country as well as oppressive regimes creating substantial conflicts, persecutions and wars. I will also analyze the impact of Saddam Hussein on the community of Iraq and how Iraq is recovering from the consequences of the Iraqi war and the journey through survival of the ethnic and religious minorities of Iraq today.

Stefan Schade  
Mentor: Bryan Riemann, Health Sciences

Comparison of Limits of Stability Testing on Static and Dynamic Surfaces

Limits of stability (LOS) testing typically involves moving the total body center of mass (TBCM) over the base of support (BOS) to targets positioned within the theoretical LOS. Research has examined LOS testing on static and dynamic (unstable) surfaces, however different testing devices were used, thus confounding data interpretation. Additionally, whether performance on static and dynamic surfaces is related remains inconclusive. PURPOSE: To compare TBCM to BOS distances and relationships between double leg LOS testing on static and dynamic surfaces. METHODS: Healthy men (n=4) and women (n=5) aged 20 to 27 yrs completed static and dynamic (unstable level 8) surface LOS testing, on the Biodex SD (Biodex, Inc., Shirley, NY). A screen displayed eight targets, positioned at 75% of the subject’s theoretical LOS around a central target, and the instantaneous location of center of pressure (static) or platform orientation (dynamic). Randomly, a target became highlighted and the subject was cued to reach the target by leaning their body. Three trials of each surface/target were completed. TBCM was computed using kinematic data of 13 body segments. Closest horizontal distance between the TBCM projection on the support surface and BOS was computed upon reaching each target. RESULTS: A significant (P=.034) surface by target interaction was revealed. Although distances were smaller for all static surface targets, post hoc testing demonstrated only one (anterior target) significant difference (95% CIdiff: .013-.046m, P=.024) between surfaces. Strong relationships were revealed for anterior (rs=.75) and anterior-left
**(rs=.72)** targets, moderate relationships for anterior-right (rs=.52), right (rs=.50) and left (rs=.47) targets, and weak relationships for posterior-right (rs=.23), posterior (rs=.30) and posterior-left (rs=.28) targets. CONCLUSION: Compared to static surface, during the dynamic testing subjects did not move their TBCM as close to the BOS perimeter. Thus, greater target distances should be considered for dynamic testing. Furthermore, static-dynamic relationships were not the same for all directions, suggesting that the two surfaces challenge different elements of the postural control system. Future research should consider differences in kinematics strategies between the two surfaces.

**Paul Sidney**  
Mentor: Regina Rahimi, Adolescent and Adult Education

*High School Literacies for the Global Learner*

As of 2012 United States high school students aged fifteen years old scored just below average on The Program for International Student Assessment. This international benchmark test measures literacies in reading, science, and mathematics across the international testing arena. Many of the literacies required for matriculation in the 21st century global society include going beyond the rudimentary reading, writing, and arithmetic. In today’s competitive global society literacies include writing for a variety of audiences, reading with an analytical focus, and applying skills to real world problem solving. The literacies of today call students to not only know how to exhibit reading comprehension, but employ and apply strategies to independently delve deeper into their own learning and make concrete connections. In conjunction with college and career readiness Core Standards, and in conjunction with educational policymakers’ needs to increase rigor, this presentation will aim to provide research based findings to address disparities in literacy and skills students may employ to increase literacy. Essential results uncovered from the research include a list of literacy based content area resources ranging from sample lesson plans to skills to increase literacy across the curriculum, to cognitive strategies for struggling readers. The findings from this resource list holds promise to provide educators with a variety of instructional strategies to address and increase adolescent literacy in the face of college and career readiness. If employed appropriately these resources hold merit in addressing disparities and in bringing student literacy levels up to par with that of their global peers.

**Peyton Seabolt**  
Mentor: June Hopkins, History

*The Struggle for the Red Front: Hitler's Motives for Operation Barbarossa*

In 1939, Adolf Hitler and Joseph Stalin entered in the Molotov-Ribbentrop Pact, also known as the Non-Aggression Pact. The two leaders promised neutrality towards each other, with agreements for trade and the split up of territories in Europe. But by 1941, Hitler launched Operation Barbarossa, invading the Soviet Union against the policies of the Pact that was still in place. Historians have questioned this decision, as the Red Army engagement of the Germans played a pivotal role in the Allied war plans. Not only did Hitler go against the Pact, but the invasion of the Soviet Union turned Germany away from the idea of a British invasion and onto the invasion of an ally of sorts. Evidence suggests that Hitler always intended for an eastern campaign, from the traditional German idea of *Drang nach Osten*, or “Drive to the East.” Hitler’s admiration of Winston Churchill led historians to question whether or not the invasion of the Soviet Union was an attempt to coerce Britain into negotiating with Germany.
Students write a great deal for a variety of purposes. However, they often tend to write in the manner they would speak when talking to a peer on social media. This project will focus on students in grade 1 who are developing their literacy abilities through creative writing. The exploration will center on creating a six word memoir per individual student. Creating a six word memoir is a more difficult task than writing about oneself in a whole paper or a paragraph (Saunders, J. & Smith, E., 2014). This genre only provides the writer with six words to use and every word counts. Students will learn to express themselves and craft a message that is important to them through only these six words. The presentation will describe the writing technique and discuss student examples. This project was part of an International Reading Association research article demonstration for our Language Acquisition course.

Epigenetic Modifications of the TLR4 Promoter in House Sparrows Using Bisulfite Sequencing

We will use bisulfite sequencing to compare epigenetic modifications in DNA methylation in house sparrows from multiple geographic locations. We will first amplify the promoter for a gene that is active in the animal’s immune system using PCR. Using PCR will give us a sufficient quantity of product for bisulfite conversion. After the bisulfite conversion is complete, the promoter will be sequenced and compared among the subjects. This will tell us where the methylated groups are in the promoter. We will compare the differences in methylation to environmental variables for each location. We will compare DNA methylation to latitude, because previous research suggests that latitude is an important predictor of house sparrow phenotypes. This project will elucidate important information that will give us greater understanding of gene expression and regulation.

Traces of the Gullah

The Gullah roots can be traced back to West Africa, pre-eighteenth century. Brought to North America during the height of the slave trade, they settled along the Coastal Southern states among plantations and major port cities. While the Gullah culture is still alive in Charleston, their traces aren't always evident. Through the method of participant observation, I sought to understand all the ways the Gullah are present on the cultural landscape of Charleston, South Carolina. Based on my observations and an organized tour of the city, I found their "traces" to be everywhere: whether it was the Gullah language, Charleston architecture or cultural markers. Paintings by famous Gullah artists are displayed throughout the city, and women sew traditional sweet grass baskets at the King Street Market. Shrimp and grits, both popular ingredients in traditional Gullah diet, have become a Southern staple and are present in the culinary choices available to both locals and tourists. Overall, what I found that the Gullah have played a major role in the history of Charleston, and those traces are still highly evident today.
The Paradox of Trauma

Paul Fussel explores the idea of hope abridged when dealing with trauma in *The Great War and Modern Memory*. Sigmund Freud investigates the moment of clarity when one realizes the missed experience of danger that leads to distress in *Beyond the Pleasure Principle*. When theorists consider trauma, they often speculate that there is a moment of realization that existence is finite. This paper explores the characters of Pat Barker’s *Regeneration*, and the paradox in their physical and mental wounds.

Shae Tenhouse-Johnson
Mentor: Rachel Green, AMT

The Art of the GIF

I will be presenting a project over the ease, accessibility and worldwide appeal that led to the recent rise in popularity of gifs. I will be talking about working in the ArtTECH Lab and the experience I gained from workshops/classes I taught. The presentation will cover the creation of the gif medium and the gif artist that made it prominent. The presentation will feature gifs made by Armstrong students and the process that went in to their designs.

Children’s book authors recognize that a story can be told in more ways than through text alone, which is why pictures are used to enhance the reading experience. When creating pictures to extend the text, illustrators must take into account the messages that the pictures display through color selection of images and decide if those feelings match the story written by the author. The purpose of this research project is to evaluate how a group of elementary school students associate colors with feelings and emotions represented in three children’s books, which will serve as mentor texts. The students will be shown different color swatches. Students will observe the color swatches and generate connections with different colors. This will evolve into identification of feelings, emotions, or situations that the colors remind them of and an evaluation of students’ responses to images presented in the mentor texts. This exercise will expand students’ comprehension and extend their visual literacy skills, which are just as important to possess as text-based literacy skills. Our project was inspired by an International Reading Association research article analysis assignment and presentation for a Language Acquisition course.

George Walker
Mentor: Michael Toma, Economics

Same-Sex Marriage in America: Does Education Affect Passage of Pro Same-Sex Marriage Laws?

There are many beliefs as to whether homosexuality and same-sex marriages should be allowed or demonized. Much of these feelings depend on where a person lives, how they were raised, and whether or not they are religious. The issue investigated here is what factors contribute to passage of pro-same-sex marriage laws across the states. A particular focus is whether and how the level of educational attainment of a state’s population affects that. The
model herein considers the effects of higher education on the passage rates of same-sex marriage in different states. As expected, the percentage of a state’s population with a bachelor’s degree or higher is positively related to the likelihood of passage of laws allowing same-sex marriage.

**Remy Wilkins**  
Aimee Burdette  
Emily Cattanach  
Mentors: Nancy Henderson, Physical Therapy  
George Davies, Physical Therapy

_Accuracy of Self-Perception of Footstrike During Running_  

**Purpose/Background:** The purpose was to determine if runners are accurate in the assessment of their footstrike. To our knowledge, there are no published studies that currently assess the accuracy of self-perception of footstrike. **Methods:** Subjects who ran at least an average of 10 miles per week were recruited via non-probability convenience sampling from the general running population of Savannah, GA. Subjects were randomly assigned to begin on either an indoor track or a PRECOR treadmill for one mile at a self-selected pace. Footstrike was recorded using the Coaches Eye Application on an iPhone 5 using standardized parameters. Accuracy of footstrike was assessed on the right and left foot on both track and treadmill. **Results:** 102 subjects (58% female; averaged 16.4 miles a week) completed the study. Of this sample, 36% of subjects wore minimalist shoes while 66% wore non-minimalist shoes. Cohen’s Kappa Coefficients were used to assess accuracy and indicated poor percent agreement in self-perception of footstrike for the right and left foot on both track and treadmill (Kappa values .051-.143) Average percent agreement on footstrike are as follows: Forefoot (50%), midfoot (57%), and rearfoot (46.5%) on track, and forefoot (83.5%), midfoot (25%), and rearfoot (47%) on treadmill. **Conclusion:** We concluded subjects were not accurate in the self-perception of their footstrike on an indoor track or treadmill. The results indicate that further research is needed in order to better understand if inaccurate self-perception of footstrike relates to risk of injury.

^Jessica Young  
Mentor: Nancy Tille-Victorica, Spanish  

_**Pérdida de masculinidad en Los cachorros de Mario Vargas Llosa**_  

Uno de los aspectos más importantes de Los Cachorros (1967) por Mario Vargas Llosa, es el tema del machismo y lo que significa ser un hombre. En la novela, Cuéllar, el protagonista principal, sufre de niño la pérdida traumática del pene. A lo largo de la novela, vemos cómo esta castración lo impacta psicológicamente en los años importantes de la adolescencia y como joven adulto. La sociedad machista en la que vive no le permite superar su trauma y se siente cómo si necesita ser aún más masculino. En esta presentación voy a explicar cómo Vargas Llosa define el concepto de masculinidad a través del accidente y las experiencias de Cuéllar y cómo resalta la importancia del machismo en el desarrollo emocional y psicológico de su personaje.

Jacqueline Zantow  
Mentor: Hans-Georg Erney, LLP

_**Perchance, Me Sprigadee: Resolving the Creole Continuum in Andrea Levy’s Small Island**_  

Four central characters and four distinct voices; this feature immediately separates Andrea Levy’s 2004 publication, _Small Island_, from the typical post-colonial novel. Narrowing
the focus, Levy’s two Jamaican characters exist on differing ends of the creole spectrum: Gilbert embraces what Kamau Brathwaite terms as “nation language” in order to preserve his Caribbean patois in the presence of British English, yet Hortense employs hypercorrection and stringent British diction to bury her roots. By analyzing the novel’s diction, hypercorrection, and grammar, this presentation examines the Caribbean Creole continuum’s struggle with a preferentially English and creole-prejudiced British imperialistic culture. However, *Small Island*’s argument is not purely a mixture of oil and water; Levy shows distinct, yet subtle, progressive changes in Gilbert and Hortense’s languages. As the novel is a series of flashbacks captured in alternating “before” and “1948” sections, close reading pinpoints specific scenes where the two characters increasingly embrace their Jamaican heritage through augmented incorporation of patois. Levy sews these stylistic changes with pronounced instances of symbolism (such as the removal of a white glove and the dislodging of a mean rider on a mule’s back) to reconcile nation language with the “mother” country of England through suggestions of cultural hybridization.