

CELEBRATION OF STUDENT RESEARCH AND CREATIVITY

APRIL 13-17, 2015

**SPOTLIGHTING
THE BEST OF
STUDENT WORK**





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LETTER FROM THE PRESIDENT

To our Participants and Guests:

Welcome!

Congratulations to our students and faculty taking part in our 13th annual Celebration of Student Research and Creativity. And thank you to our guests for supporting our students and our University.

This weeklong event recognizes our students' outstanding research and creative projects. Undergraduate research is a hallmark of an NKU education. Last year, 750 students presented posters, oral presentations, or other scholarly and creative works. And 139 faculty mentored these students, many working with more than one student.

A highlight of the event is the one-to-one mentoring by our professors who are engaged in cutting-edge research. These collaborations foster deeper learning and nurture the intellectual bond between professor and student – and support our core values of excellence and innovation.

This work creates a lasting impact. Many student researchers partner with the public and non-profit sectors, the P-12 community, and industry to help solve real-world challenges. Their research often leads to publication in scholarly journals and presentations at professional meetings; further, our students' creative projects in the arts are often critically acclaimed and shown in the broader community.

Each year, I talk with some of our student scholars about their projects. I always come away with a deeper appreciation for the value of undergraduate research. I hear passion in their confident, intelligent conversations. I see sparks of curiosity and a thirst for knowledge and understanding. I feel their optimism when they talk about their bright futures.

We have a tradition of inspiring ambition, self-determination, and a strong work ethic. These are some of the key lessons that enable our students to achieve their career goals and live meaningful lives.

This event is just one of the many ways we showcase our students and faculty as they fulfill our promise to lead with excellence.

Sincerely,


Geoffrey S. Mearns
President



LETTER FROM THE PROVOST

Dear Celebration Participants,

It is my great pleasure to welcome you to NKU's 2015 Celebration of Student Research and Creativity!

This year's event continues the remarkable tradition of celebrating the outstanding scholarly and creative work being produced by NKU's students under the sponsorship of our faculty.

The continued growth in the number of participants each year is a true testament to the dedication of our students and faculty. This week long event is truly a wonderful opportunity for our students to display their scholarship and creativity through poster presentations, oral presentations, interactive demonstrations, performances, and exhibits of artistic work with the campus community.

The Celebration of Student Research and Creativity provides significant evidence of the close connection between students and faculty that has become a hallmark of the NKU educational experience. These opportunities enhance student learning via intense engagement in a chosen academic field coupled with strong connections with faculty providing a strong foundation for student success. This work is challenging and takes extra effort, but the rewards are astounding!

In closing, I join President Mearns, the deans of our colleges, and the chairs of our academic departments in congratulating the students whose work is showcased during this annual celebration and thanking the faculty who supported them.

Sincerely,

A handwritten signature in cursive script that reads "Sue Ott Rowlands".

Sue Ott Rowlands

Provost and Executive Vice President for Academic Affairs

SCHEDULE OF EVENTS

CELEBRATE NKU:
ALL AROUND CAMPUS

POSTER PRESENTATIONS, INTERACTIVE PRESENTATIONS AND MUSICAL PERFORMANCES

STUDENT UNION BALLROOM

WEDNESDAY, APRIL 15

12:45-3 p.m. Poster session
2-2:30 p.m. President and Provost welcome
2:30-3 p.m. Vocal Jazz performance

ORAL PRESENTATIONS

FOUNDERS HALL 109

MONDAY, APRIL 13

2-4:45 p.m. Biological Sciences and Chemistry

SCIENCE CENTER 207

TUESDAY, APRIL 14

1-4 p.m. Chemistry

STEELY LIBRARY 102

TUESDAY, APRIL 14

1:45-5 p.m. English; History & Geography; Honors;
Psychological Sciences;
Sociology, Anthropology & Philosophy

ARTISTIC EVENTS

CORBETT AMPHITHEATER

MONDAY, APRIL 13

3-4 p.m. Music Prep: NKU String Project &
NKU Vocal Corps

TENT ON THE PLAZA

TUESDAY, APRIL 14

Noon Musical Theatre Tour Troupe
2-2:45 p.m. Musical Theatre Scene/Song Showcase
3:30-4 p.m. et cetera! Small World Theatre
Collective Tour Troupe

FARRIS AMPHITHEATER

TUESDAY, APRIL 14

1-1:30 p.m. Dance Tour Troupe

TENT ON THE PLAZA

WEDNESDAY, APRIL 15

10-10:30 a.m. Women's Ensemble
11 a.m.-Noon Playwriting Showcase
1-1:30 p.m. NKU Chorale
2-3 p.m. Concert Band
3-4 p.m. National Poetry Month Open Mic



CORBETT AMPHITHEATER

THURSDAY, APRIL 16

1-1:50 p.m. Steel Band
2-2:45 p.m. Trumpet Ensemble

TENT ON THE PLAZA

THURSDAY, APRIL 16

2-3 p.m. Anointed Voices Gospel Choir

FINE ARTS CENTER, 3RD FLOOR –
MAIN GALLERY

THURSDAY, APRIL 16

3:30 p.m. Senior Art Exhibition
Short Presentations by Artists
5 p.m. Senior Art Exhibition
Opening reception

TENT ON THE PLAZA

FRIDAY, APRIL 17

10 a.m.-2 p.m. Painting on the Plaza
11-11:45 a.m. Musical Theatre Student Soloists
Noon-1 p.m. Faculty Mentors Celebratory Lunch
Noon-2 p.m. Student Computer Music

GRIFFIN HALL DIGITORIUM

FRIDAY, APRIL 17

11 a.m.-1 p.m. Photography at NKU
1-2 p.m. Film Festival

REACH FOR THE STARS EVENTS

NKU HAILE PLANETARIUM, SC 409

MONDAY, APRIL 13

Noon-1 p.m. Earth, Moon and Stars

THURSDAY, APRIL 16

11 a.m.-noon Earth, Moon and Stars
Wonders of the Universe
1-2p.m. Seven Wonders

LANDRUM ACADEMIC CENTER 200

MONDAY, APRIL 13

2-4 p.m. Behind the scenes: Museum of Anthropology



ARTISTIC PRESENTATIONS

MULTIPLE LOCATIONS

A-1: KASEY LONG, MAC PAYTON, ALISON WIEGAND, HEATHER SZURLINSKI, MICHELLE ERIKSEN

The 2015 College Movie Festival Films

FACULTY SPONSOR(S): CHRIS STROBEL, COMMUNICATION

Abstract: The College Movie Festival is an annual celebration and competition of student filmmaking throughout the Greater Cincinnati area. Student filmmakers enrolled in media production programs write, plan, shoot and edit short films over a two-week period. These films are reviewed by area filmmaking professionals and feedback is given to the students as they prepare their final versions. Five NKU filmmaking teams - comprised of over 30 undergraduate students - created movies in 2015. These are their final films.

A-2: KATIE LIPPS-HURIER

Fabricate

FACULTY SPONSOR(S): DAVID KNIGHT, VISUAL ARTS; BARBARA HOUGHTON, VISUAL ARTS

Abstract: *Fabricate* is the title of a series of photographs in which the everyday world has become unfamiliar. After experiencing vivid dreams, I had the impulse to photograph a familiar place and *fabricate* it with layered images to create uncertainty and uniqueness. Every entrance into our city leads to something new to explore; sometimes pleasant, sometimes not. The images in *Fabricate* create a surreal world that has familiarity to make it welcoming and intriguing for the viewer. These creations bend our imagination and escape reality. Let your imagination go as you explore each location in this series.

A-3: EMMATHOMPSON

Moby Comes to Covington: Twenty Years of "Moby-Dick" Art by NKU Students

FACULTY SPONSOR(S): DAVID KNIGHT, VISUAL ARTS; ROBERT WALLACE, ENGLISH

Abstract: Since 1994, Professor Robert K. Wallace has offered a creative option for the final project in his English classes - resulting in a vast collection of student artwork inspired by Herman Melville's *Moby-Dick* in particular. I have curated an art exhibition displaying this body of work. Dr. Wallace and I have worked one-on-one with the Kenton County Public Library and NKU to plan and install this exhibition and related events: a *Moby-Dick* marathon reading, *Moby-Dick* Symposium, and tour of *Moby-Dick* artwork on NKU's campus. This project gives a comprehensive view of how teaching literature through art can be a rewarding experience.

A-4: BRIGETTE BEDEL, KATHRYN BENNETT, ERIN BOONE, TAYLOR DANIELS, MADELINE DELGADO, HANNA ENGLE, ASHLEY FISCHER, MACKENZIE FRANK, DANIELLE GEHLER, KELSIE HOWELL, CHRISTOPHER HUGHES, JACOB KRUER, KATHERINE LIPPS, JEREMY MARTIN, LINDSAY MCCARTY, ALEXANDRA POWELL, BROOKE SCHOCKER, EVAN SGOURIS, CAMERON WHEATLEY, DEREK WHITE

Documentary Photography - Working with Non-Profit Organizations

FACULTY SPONSOR(S): MATTHEW ALBRITTON, VISUAL ARTS

Documentary Photography is taught every Fall semester at NKU. This service-learning course combines the documentary approach in photography with volunteer work in collaboration with area non-profit institutions. At the end of the class, students produce a multimedia presentation with images and sound that seek to represent their insight into the organization and shed light on the social issue the non-profit seeks to remedy.



INTERACTIVE PRESENTATIONS

ABSTRACTS ARE LISTED BY DEPARTMENT OF THE FIRST FACULTY SPONSOR.

I-1: CARRIE CROTZER, KEVIN SCHULTZ, KODY KAHLE, NANCY CURTIS, WYATT NOLEN, MATT SPAULDING

Expanding Journalism through Digital Media

FACULTY SPONSOR(S): MICHELE DAY, COMMUNICATION

Abstract: The Northerner, NKU's student-run news organization, has spent the last year growing its multimedia team and experimenting with powerful new ways of storytelling. The projects ranged from a behind-the-scenes look at the story of former NKU student Gary Webb, a journalist whose life and death were portrayed in the movie *Kill the Messenger*, to an emotional package on how NKU students deal with the loss of loved ones, to a 360-degree view into some of NKU's top offices to an immersive experience into the world of parking at NKU.

I-2: ALEXANDER MURPHY-WHITE

Immersive Experience of an Interactive Music Video with Perspective Shifts

FACULTY SPONSOR(S): SOOKYUNG CHO, COMMUNICATION

Abstract: One of the most distinctive characteristics of contemporary art is providing multiple viewpoints. The concept of 'perspective shifts' has been experimented by various artists, such as Paul Cezanne and novelist James Joyce. I intend to demonstrate the perspective shifts with an interactive video. I used Adobe Flash to add buttons to allow users to switch among the multiple videos. This results in a music video with multiple camera angles that users can control. This enhances the immersive experience, making users feel as if they are with the individual players.

I-3: JOHN WELLS, KRISTEN GOODRIDGE

Motor Skill Enhancing Pen

FACULTY SPONSOR(S): KASSIANI KOTSIDOU, ENGINEERING TECHNOLOGY

Abstract: Our project uses positive reinforcement techniques to assist with the efficient grasping of writing utensils. It is known that poor pen grip can lead to poor handwriting. Training kids on proper pen grip may be quite challenging and our design may help with this challenge. It requires a pen device to be connected to a microcontroller, such as the Arduino platform, and responds by playing sounds and displaying visuals when the pen is held correctly. Apart from a microcontroller, our project also uses resistors and photoresistors, making it relatively inexpensive to develop.

I-4: ELLEN YATES, NATHAN STAHL, SAMANTHA FITZPATRICK

Which Form of Political Protest Art Communicates Most Effectively to American Students?

FACULTY SPONSOR(S): DIANA BELLAND, MUSIC

Abstract: We explored various forms of political protest art in the Arab Spring countries and in Russia/Ukraine to find out which form of artistic expression was most effective in transmitting information to students in the United States. We looked at music, art and poetry to learn what artists are doing to promote international awareness of human rights violations in their respective countries. We then polled forty-two NKU students between the ages of 18 and 20. Our research concluded that people found music to be the most effective form of expression at 41% followed by blogging at 26%.

I-5: BRANDY REXROAT***The Morality of the Jim Crow Laws***

FACULTY SPONSOR(S): KIMBERLY WEIR, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: Following the American Civil War, there were three amendments to the Constitution passed. These amendments called for the termination of slavery, equality under the law, and the right of black men to vote. In order to prevent the equality granted from the Civil War Amendments there were new laws passed, none more famous than the Jim Crow Laws. The Jim Crow Laws go against the general established morality by maintaining the racist society that denied basic human rights to some of its citizens. This presentation looks to show just how these laws created a rift in morality that ultimately led to overturning them.

I-6: AMANDA WALDEN***Cultivating Secondary Education***

FACULTY SPONSOR(S): KIMBERLY WEIR, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: For centuries the direction and structure of education, particularly secondary education, has matured tremendously. Up until the early 1900s, institutions and programs for education received insufficient assistance, hindering the foundational ambitions of the education system overall. Nationalistic goals pushed our founders to encourage learning and knowledge in order to benefit society for the future generations to come. The objective of my research is to consider current and prospective research on secondary education, along with what else can be done in order to obtain maximum potential in education to benefit not just a society, but individual students as well.



ORAL PRESENTATIONS

ABSTRACTS ARE LISTED BY DEPARTMENT OF THE FIRST FACULTY SPONSOR.

O-1: SAMANTHA HAMPTON, MOLLY KROMME, MELINDA STEGMAN, CHLOE BATES
Biochemical and gene expression changes in mice exposed to polychlorinated biphenyls during early brain development

FACULTY SPONSOR(S): CHRISTINE CURRAN, BIOLOGICAL SCIENCE; ALEJANDRO LOPEZ

Abstract: Polychlorinated biphenyls (PCBs) are neurotoxicants that have been banned for decades, but remain a major public health concern. Previously, we showed that variations in the aryl hydrocarbon receptor (AHR) and the enzyme CYP1A2 affect developmental PCB neurotoxicity. For these studies, we used immunohistochemistry to assess gene expression and HPLC to measure neurotransmitters. Although we found no significant differences in dopamine, PCB-treated mice with a high-affinity Ahrb genotype had lower levels of the dopamine metabolite DOPAC compared with the corn oil-treated controls. There was also a main effect of genotype with Cyp1a2(-/-) mice having lower DOPAC compared to wild type mice.

O-2: MEGAN MENIX, CHLOE BATES, SAMANTHA HAMPTON, KELSEY TAYLOR, KELSEY KLINEFELTER, SEAN CAMPBELL, MELINDA STEGMAN***Assessing the role of CYP1B1 on motor function using a mouse model***

FACULTY SPONSOR(S): CHRISTINE CURRAN, BIOLOGICAL SCIENCES

Abstract: While examining genetic susceptibility to PCB-induced

neurotoxicity, we discovered that Cyp1a2(-/-) knockout mice exhibited motor deficits independent of treatment. To expand those studies, we performed a battery of motor function tests on a closely related line of knockout mice, Cyp1b1(-/-). We generated heterozygous parents and tested offspring from all three genotypes: Cyp1b1 (+/+) wild type, (+/-) heterozygotes, and (-/-) knockouts. The tests used assess function in the nigrostriatal pathways and the cerebellum, two brain regions required for normal motor function. We found the greatest differences in the sticker removal test which indicates CYP1B1 is required for normal sensorimotor function.

O-3: ALYSON MCLANE***Survey of Bacterial Resistance in Recreational Water Sources in the Greater Cincinnati Area***

FACULTY SPONSOR(S): JOHN CARMEN, BIOLOGICAL SCIENCES

Abstract: The greater Cincinnati/Northern Kentucky area contains many notable bodies of water which are used for a wide variety of leisure activities. Many of these locations also receive runoff from sewage treatment plants, hospitals, and farms. Despite advances in treatment methods, this runoff still contains traces of antibiotics excreted by humans and animals which promotes the growth of resistant bacteria and the spread of antibiotic resistant mechanisms. Samples will be taken from local water sources to screen for and identify resistant strains in order to survey the presence and potential risks posed by resistant bacteria in the environment.

O-4: LIZZY ANDERSON, SARAH HUME, DEREK IELES***21st Century Lesson Plans***

FACULTY SPONSOR(S): ROSEMARIE SANTOS, CENTER FOR INTEGRATIVE NATURAL SCIENCE AND MATHEMATICS

Abstract: We created and implemented a five day lesson plan on water quality. This lesson plan followed the 5E model that is an inquiry-based and experiential learning process. Our learning process mirrored our students. We became engaged with the content and pedagogy. We explored many ways to present this information. We led the initial explanation of pedagogical skills and concepts. Our mentors elaborated on the best methodologies and challenged our conceptual understandings and skills. We evaluated our success by assessing the students' success. Our lesson plan was effective, relevant, engaging, incorporates 21st century skills and is available to any teacher.

O-5: LUCAS EDELEN, BRANDON WIEFERING***Progress Toward the Total Synthesis of Recently Isolated Cyclic Peptides***

FACULTY SPONSOR(S): AMBER ONORATO, CHEMISTRY JOHN CARMEN, BIOLOGICAL SCIENCES

Abstract: Naturally occurring cyclic peptides containing thiazole-modified amino acids have become more prevalent and contain a variety of biological activities. One drawback of natural products is the insignificant amounts recovered after isolation, which reinforces the need for an effective synthesis route. The initial efforts toward the multistep synthesis will be presented. Nuclear magnetic resonance (NMR) spectroscopy was used to analyze the products and upon confirmation the reactions were optimized. Once the final compounds are achieved, Dr. John Carmen's group in the NKU Department of Biological Sciences will test them for antifungal activity.

O-6: BARBARA CATA, TERI RAE ARMSTRONG***Development and Applications of Nanopipette Probes for Hormone Detection***

FACULTY SPONSOR(S): CELESTE MORRIS, CHEMISTRY

Abstract: In this study, we employ electrochemical techniques to measure thyroid hormones with micro and nanopipette electrodes. The selective detection of thyroid hormone, thyroxine, in sodium phosphate buffer solution is demonstrated via cyclic voltammetry. Our motivation originates from the importance of developing rapid analysis systems for hormone levels in blood and will expand applications of clinical diagnostics. Nanopipette electrodes are especially suited to point-of-care testing due to rapid analysis times, simple calibration, and ability to provide hormone concentration levels. Thyroxine hormone is a marker for trauma and thyroid disease and if left untreated can have disastrous effects on an individual's health leading to other autoimmune diseases.

O-7: ALYSSA FARLEY***Deterioration of Lumicyano for Fingerprint Analysis using Atomic Force Microscopy and Investigation into Effective Alternatives***

FACULTY SPONSOR(S): CELESTE MORRIS, CHEMISTRY

Abstract: Latent fingerprint evidence can be crucial to identification in a criminal case. To this day, no two fingerprints have been found to be identical, and a person's fingerprints do not change over time. The development of a scale by which the accuracy of Lumicyano correlates to the increasing porosity of surfaces can assist an investigator by being able to determine if Lumicyano is the appropriate method for fingerprint

development based on the specific piece of material present. Having this knowledge would not only save time and cost, but also lower the risk of ruining a piece of evidence that could never be duplicated or replaced by using a poor development method.

O-8: ANDRES GASPER, MELANIE COUCH, ANDREW BLANK
Annulenes for Covalent Organic Frameworks and Hybrid π systems

FACULTY SPONSOR(S): KC RUSSELL, CHEMISTRY

Abstract: The Russell Research Group is focused on the synthesis of [12]- and [14]- annulenes for inclusion in covalent organic frameworks (COFs) and oxacalixarene-annulene hybrids, respectively. In addition to possessing interesting photophysical properties, COFs have been found to be highly efficient catalysts and may be useful in natural gas storage. Annulene-oxacalixarene hybrids offer a unique opportunity for investigating π - π system interactions. Castro-Stephens Coupling conditions were used to obtain the [12]-annulene for the COF project, while successive Sonogashira couplings were utilized to synthesize the trimer precursor for a [14]-annulene compatible with an oxacalixarene.

O-9: CHAD BENEKER

Examining new synthetic strategies that functionalize fullerene and coronene for organometallic supramolecular systems.

FACULTY SPONSOR(S): KEITH WALTERS, CHEMISTRY

Abstract: Our group has an interest in the incorporation of extended aromatic systems (e.g., fullerene and coronene) into supramolecular systems to study their photoinduced excited state behavior. Fullerenes exhibit the desired electron-transfer interaction with attached transition metals, but its nonpolar nature has restricted its reactivity. The reactions that produce these complexes are relatively inefficient. This talk describes our efforts to explore similar functionalization strategies with coronene as an alternative system. The modular nature of these strategies allows us to explore different reaction sequences to improve the final product. Descriptions of these strategies will be presented, along with detailed NMR (1D and 2D) analysis of the obtained products.

O-10: HANNAH HEARN

NKU Solar Cell Research: Fullerene-transition metal sensitized solar cells - Construction and efficiency studies

FACULTY SPONSOR(S): KEITH WALTERS, CHEMISTRY

Abstract: Our research group has been interested for several years in the design and spectroscopic examination of fullerene-transition metal supramolecular systems. The ability for these systems to undergo photo-induced electron transfer, along with their broad absorbance of ultraviolet and visible light, makes them good dye candidates in semiconductor solar cells. This presentation describes our efforts to prepare TiO_2 -based solar cells with both our molecules and other baseline dyes. Particular attention is paid to the cell's electrical capabilities (e.g., photovoltage and photocurrent) and overall photoelectric efficiency. Although our numbers remain below those for existing solar cells, the results allow us to continue improving our systems and measurement capabilities.

O-11: JESSICA HORN

Simplified synthetic strategies for fullerene-bipyridine ligands used in organometallic complexes for solar cell dyes.

FACULTY SPONSOR(S): KEITH WALTERS, CHEMISTRY

Abstract: Our group has been interested in supramolecular systems that link substituted fullerenes and transition metal chromophores. These systems undergo unique photo-induced electron transfer. However, our work is hampered by synthetic issues surrounding the fullerene subunit. This talk describes our efforts to improve the methodologies involved with preparing our system. A four step sequence is used to prepare these systems - each requiring purification that produces low yields. We have explored alternative strategies, including an innovative one-pot strategy. This pathway has been modified through numerous attempts, and results suggest it will provide an efficient method to prepare both our fullerene systems and other aromatic systems (e.g., coronene).

O-12: THUY DO, JONATHAN WEBSTER, REID KLINE

Polyhydroxylated Chalcones as Xanthine Oxidase Inhibitor: Synthesis and Biological Evaluation

FACULTY SPONSOR(S): LILI MA, CHEMISTRY; STEFAN PAULA, CHEMISTRY

Abstract: Xanthine oxidase, which catalyzes the conversion of xanthine to uric acid, is an attractive pharmaceutical target for the treatment of gout. Structured-based drug design suggested that chalcones could potentially reduce the amount of uric acid in blood by inhibiting xanthine oxidase. In this study, di-, tri-, tetra-, penta-, and hexa-hydroxylated chalcones were synthesized via a three-step synthetic route. Their inhibitory effects against xanthine oxidase were determined by a spectroscopic assay that followed the oxidation of xanthine to uric acid over time. Compound E-1-(2,4-dihydroxyphenyl)-3-(3,4-dihydroxyphenyl)prop-2-en-1-one showed

the strongest inhibitory potency with an IC₅₀ value of 1.13 μM among forty-one chalcone derivatives.

O-13: NATHAN JOHNSON, THUY DO

Palladium-Catalyzed Direct Heteroarylation of Ketones

FACULTY SPONSOR(S): LILI MA, CHEMISTRY

Abstract: Palladium catalysis is becoming more and more important in petroleum and other chemical industries. Compounds bearing an -heteroaryl functionality find their applications in many fields of organic chemistry. However, the palladium-catalyzed direct -heteroarylation of ketones is rarely reported in literature. In this study, we utilized NMR technique to monitor reaction progress and to screen reaction conditions such as temperature, time, solvents, et al. The methodology established in this work will be applied to the synthesis of heteroaryl isoflavanones, a new class of aromatase inhibitors for the treatment of breast cancer.

O-14: VICHETH KONG

Photochemistry and Photophysics of Estrone

FACULTY SPONSOR(S): PATRICK HARE, CHEMISTRY

Abstract: Estrone has been shown to undergo degradation under UV light. The photodegradation rate depends on estrone's interactions with the solvent environment. Additionally, estrone's photoproducts themselves often photodegrade. Gas-chromatography-mass spectrometry is utilized to measure the photodegradation rates and photoproducts of estrone in different solvent environments. Solvent dependences to the rates and photoproduct structures were found, and a concentration dependence to the rates was found.

O-15: KRISTA LOOSE, VICHETH KONG, BROOKE SIEGEL, RACHAEL WESSNER

Photochemistry and Photophysics of Fluoxetine

FACULTY SPONSOR(S): PATRICK HARE, CHEMISTRY

Abstract: Fluoxetine is a widely prescribed antidepressant sold under the trade name Prozac. It has been found in surface waters, where it can have undesirable effects on aquatic organisms. UV photodegradation can be used as part of a waste treatment plan, but the process and products are not well understood. Fluoxetine photodegrades at different rates and into different products depending on the solvent and pH, with similar solvent-dependences also evident in the photophysical properties of the molecule. These differences are due to changes in the molecule's excited states, which are explored with computational chemistry.

O-16: MICHELLE ERIKSEN

How (And Why) The West Was Murdered

FACULTY SPONSOR(S): ANDREA GAZZANIGA, ENGLISH

Abstract: In 1969, the landmark film *The Wild Bunch* was released by Warner Brothers Studios. Directed by Sam Peckinpah, the film explores concepts that are commonly seen when examining American Westerns of the 1960's: the aging outlaw being displaced because of eastern influence. Peckinpah draws on characteristics of previous westerns, but deviates from the genre with the film's end. This presentation will explore how Peckinpah uses *The Wild Bunch* to make a social statement about war and patriotism through the Western genre. This presentation will also explore how the film's violent ending offers us a statement on the western genre.

O-17: ALYSSA FAUGHT

The Fordian Woman: Challenging Gender Archetypes in *The Searchers*

FACULTY SPONSOR(S): ANDREA GAZZANIGA, ENGLISH

Abstract: The western frontier is an archetypically masculine landscape. So what, then, is the place of the woman in the pistol-toting West? Is she a foreign object? A rare prize? A nuisance? What symbolic meaning has the Western woman come to embody, and what territory, perhaps, does she have yet to explore? Time-honored filmmaker and veritable poet of the western genre, John Ford, explores these questions and more in his cowboy classic, *The Searchers*. In it, Ford depicts a woman unafraid, fierce, and self-reliant. She is a fighter, strong as the men she capably raises, firm as the land she jointly cultivates.

O-18: EMMATHOMPSON

Documenting Student Artwork Inspired by Herman Melville & Emily Dickinson

FACULTY SPONSOR(S): ROBERT WALLACE, ENGLISH

Abstract: Throughout his career, Professor Robert K. Wallace has fostered the study of literature through art interpreting the work of Herman Melville and Emily Dickinson. Since 1994, he has offered a creative option for the final project in his respective English classes—resulting in a vast collection of student artwork inspired by Melville and Dickinson. I present my two catalogs documenting these bodies of work. I used Adobe InDesign to create each layout and worked with a local printer to produce professional prints. These catalogs give a comprehensive view of what Dr. Wallace's students have created over the past two decades.

O-19: DUSTIN WHEAT

Machinima: Bringing Mary Shelley's *Frankenstein to Life*

FACULTY SPONSOR(S): TAMARA O'CALLAGHAN, ENGLISH

Abstract: Machinima, or virtual film-making, uses real-time computer graphics engines, such as Second Life or World of Warcraft, to create a cinematic production. This presentation will briefly explain machinima, its origins in gaming, and the common genres. In particular, I will explore how digital humanists are currently using this new media art form to re-vision literary works for the classroom and the general public. A screening of my own short machinima drawn from Mary Shelley's *Frankenstein* will be included.

O-20: REBECCA HUDGINS

"This place has wonderful powers": The Force of Nature in *Howards End*

FACULTY SPONSOR(S): TONYA KROUSE, ENGLISH

Abstract: E.M. Forster's *Howards End* is traditionally understood as a novel about the condition of England. The house and land at Howards End are viewed as symbolizing problems of class, society and property, ignoring the role of nature in the novel. Most scholarship about *Howards End*, beginning with Lionel Trilling's influential work, focuses on nature as an object that is controlled and made useful by men. Contrastingly, my paper takes an ecofeminist approach, focusing on the relationship between women and nature in the novel, claiming that nature in *Howards End* is an active force, not just something acted upon by men.

O-21: SANDRA STEIBER

The Second Coming of the Ku Klux Klan

FACULTY SPONSOR(S): ANDREA WATKINS, HISTORY & GEOGRAPHY;

BURKE MILLER, HISTORY & GEOGRAPHY

Abstract: The Ku Klux Klan of the 1920s underwent remarkable changes since its initial emergence during Reconstruction. This Second Klan took on a different character – shifting towards nationalism rather than sectionalism, and attracting members from new regions. Rejection of the rising flapper culture of post-war America and a general fear of outsiders provided new polemics for the Klan. Inspired by a photograph from the Kentucky Historical Society, this presentation examines the rise of a more "patriotic" Klan marked by a dramatic graduation from its prior occupation with the Antebellum South.

O-22: ALMA ONATE

AIDS, HIV, and Witchcraft in Sub-Saharan Africa

FACULTY SPONSOR(S): APRIL CALLIS, HONORS

Abstract: In the early 1980s, the HIV epidemic broke out in Africa. With a rapid infection route and no treatment/cure, HIV quickly became lethal. Many African cultures turned to explanations that included witchcraft in their quest to cure, treat, and prevent HIV. This research investigates the link between HIV and witchcraft beliefs among the Akan, Lugbara, and Ndebele people and how these beliefs impacted the perception, spread, and treatment of HIV in these cultures. Comparison of Western and sub-Saharan cultures' responses to HIV allows for a better understanding of the lessons that this epidemic provides for an adequate global medical system.

O-23: KATIE RAGLAND

Modern Prophecy: The Existence of Contemporary Divination Methods

FACULTY SPONSOR(S): APRIL CALLIS, HONORS

Abstract: Traditionally, divination has been thought of as synonymous with non-western cultures, long-gone historic traditions, and religious belief. However, this presentation analyses several types of divination that are modern, Western, and secular in nature. Meteorology, the scientific investigation of the sky and weather patterns, and Phenology, a prophetic exploration of the skull, are examples of predictive-science accepted as truth by intellectuals within modern-day academia. As an important part of modern scientific thought, these examples provide a multifaceted examination of divination.

O-24: JESSICA SELLERS

Sharing a Bed with Death: Necrophilia and Queer Theory

FACULTY SPONSOR(S): APRIL CALLIS, HONORS

Abstract: This presentation analyzes necrophilia, a topic not often approached in academia. Specifically, the author focuses attention on the different types of necrophilia, the qualities of a necrophile, and the few available theories that attempt to explain sexual attraction to corpses. In addition, the presentation applies Foucault's theories of sexuality to necrophilia, specifically examining his ideas of sexual speciation, confession, and bio-power, in order to explain how and why the necrophile has been classified as a sort of sexual leper in Western society.

O-25: ANGELA SARVER

Accentuate the Positives of Multiple Roles: Work to Family and Family to Work

Facilitation for Employees and Parents

FACULTY SPONSOR(S): KATHLEEN FUEGEN, PSYCHOLOGICAL SCIENCE

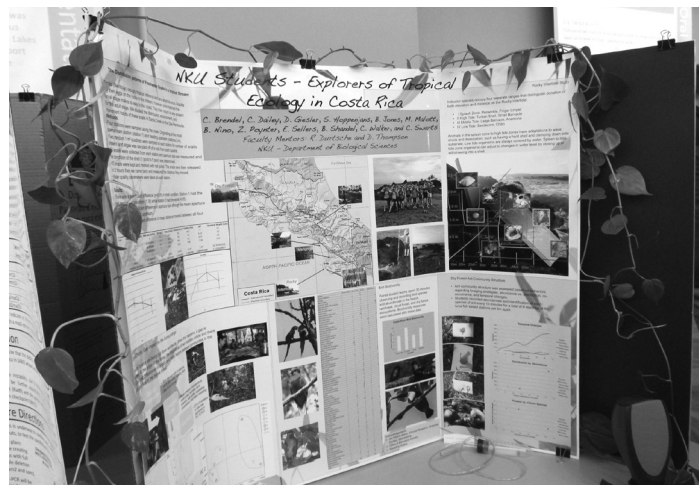
Abstract: Employees occupy multiple roles. Scarcity theory describes energy for multiple roles as a limited, fixed pie consumed by participation in each role. Enhancement theory describes energy as boundless, and individuals gain resources from each role. I hypothesized 1) those presented a role enhancement message would report more role facilitation than those presented a scarcity message, 2) facilitation is positively correlated with role commitment, and 3) those presented an enhancement message would form a more favorable impression of another individual with multiple roles. Partial support was found for hypotheses 1 and 2. Hypothesis 3 was not supported.

O-26: PAMELA THOMAS

Pollution and Purity: a comparison of Romani Gypsy society, Hinduism, and two Anglo-Saxon deviant burial sites

FACULTY SPONSOR(S): NICOLE ROTH, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: Catholics repent and Orthodox Jews practice a kosher diet. What is the theme? The commonality is pollution and purity. This concept, seen in current societies, is often ambiguous in the archaeological record. The following study is a cross-cultural examination of pollution and purity as played out in the funerary, social, and ideological spheres, by applying present-day ethnographic analogies with the archaeological past. Ultimately, this study will increase the literature of pollution and purity by explicitly detailing the relationships of two Anglo-Saxon deviant burial sites, present-day Romani Gypsy views of the body, as well as the Hindu caste system.



POSTER PRESENTATIONS

ABSTRACTS ARE LISTED BY DEPARTMENT OF THE FIRST FACULTY SPONSOR.

P-1: BREONNA NINO, COURTNEY ROUSH

Elucidating why Rusty Crayfish (*Orconectes rusticus*) is a Successful Invasive Species

FACULTY SPONSOR(S): CHARLES ACOSTA, BIOLOGICAL SCIENCES

Abstract: Rusty crayfish, *Orconectes rusticus*, has widely spread through upper Midwest and southern Canada. Here it replaces native crayfish and causes ecosystem and diversity changes. Little research has been done on rusty populations in native habitats. We studied crayfish populations in two second-order streams in Northern Kentucky in summer 2014. Three-Mile Creek had higher density than Tug Fork Creek, due to higher reproductive rates and offspring survival. Our analysis of calcium and pH did not indicate any differences between creeks. A meta-analysis of combined data from these and other streams sampled over five years was completed to compare the population dynamics.

P-2: KELSEY KLINEFELTER, MOLLY KROMME, CHLOE BATES

Comparing gene expression in mice resistant and susceptible to developmental PCB exposure

FACULTY SPONSOR(S): CHRISTINE CURRAN, BIOLOGICAL SCIENCES

Abstract: Polychlorinated biphenyls (PCBs) are neurotoxic pollutants commonly found in the human food supply. In our previous studies, mice treated developmentally with PCBs had learning, memory and motor deficits when tested as adults. Our goal is to compare gene expression in the liver, cortex, and cerebellum of mice from three different genotypes known to be resistant or susceptible to PCBs. We compared the RNA

yields using two common extraction reagents – RNAzol TriReagent – and found no significant differences in RNA quantity or quality. Long-term, gene expression will be assessed using qPCR arrays to identify key pathways that are changed following PCB exposure.

P-3: CLARE LUDWIG, JOSEPHINE BROWN, JAMIE WEIMER
Quantifying Amino Acids in Brain Tissue from Taurine-Treated Mice

FACULTY SPONSOR(S): CHRISTINE CURRAN, BIOLOGICAL SCIENCES

Abstract: Taurine is an amino acid found in high concentrations in energy drinks. Our behavioral studies in mice showed that consumption of high-dose taurine during adolescent brain development alters behavior and learning and memory. We are using high-performance liquid chromatography (HPLC) and enzyme-linked immunoassays (ELISA) to explore changes in brain and blood chemistry in the treated and control mice. Brain tissue (cortex, cerebellum and hypothalamus) were collected following our behavior experiments. Blood was collected immediately after dosing ended and one month later. We are quantifying both taurine levels and changes in neurotransmitter levels.

P-4: MORGAN LYONS, KATHERINE OLLIER, KELSIE BROWN, CAROLINA MARINI, ARNELA ZEKIC, JESSE HOCKENBURY

Clearing the Air: APplying Informatics to Reduce Traffic Congestion in Greater Cincinnati

FACULTY SPONSOR(S): CHRISTINE CURRAN, BIOLOGICAL SCIENCES; ZACH HART, COMMUNICATION

Abstract: Environmental Science students are working in collaboration with students and faculty in Biological Sciences and the College of Informatics to develop marketing materials that will change NKU commuter habits. NKU surveys indicate more than half of NKU students are interested in car pooling and transit, but only a small percentage actually use these options. Our part of the project was to analyze the economic, environmental, and human health effects of traffic-related air pollution (TRAP). Our analysis showed that students using TANK could save hundreds of dollars each year while also improving their fitness and reducing pollution.

P-5: JAMIE WEIMER, JOSEPHINE BROWN, BREANN HAYS, CLARE LUDWIG
The effects of excess taurine consumption on adolescent brain development

FACULTY SPONSOR(S): CHRISTINE CURRAN, BIOLOGICAL SCIENCES

Abstract: Taurine is an amino acid produced by the brain, but it is also a major component of energy drinks. These drinks are marketed toward teenagers, whose brains are still developing. This study used a mouse model to analyze the effects of high-dose taurine on the adolescent brain. Weanling mice were treated with taurine for 30 days prior to behavioral testing. Tests analyzed anxiety, motor function, hyperactivity and reactions to the stimulant caffeine which is also found in high levels in energy drinks. We found that taurine-treated male mice had a significantly greater response to caffeine compared with controls.

P-6: WILLIAM CORWIN

Determining Influences of Altered Growth When Measuring Chromosome Loss Rates with Fluctuation Analysis

FACULTY SPONSOR(S): ERIN STROME, BIOLOGICAL SCIENCES

Abstract: The goal of this study is to improve the estimation of whole chromosome loss rates by considering growth rate changes as a variable in *Saccharomyces cerevisiae*. Whole chromosome loss can be estimated through a statistical procedure called Fluctuation Analysis, particularly through use of the method of the median. The experimental setup involves examining the rate of development of resistance to canavanine. The underlying principles for calculating loss rate are based on the Luria-Delbrück distribution model. Multiple factors that could improve the estimations are being explored, including variable carbon sources, amount of carbon source, growth time of colonies, and temperature during growth.

P-7: OLIVIA DAVIS, MIRANDA COMBS, ERIN STROME

Observations into the Role of the MSH4-MSH5 Heterodimer in Yeast Genome Stability

FACULTY SPONSOR(S): ERIN STROME, BIOLOGICAL SCIENCES

Abstract: BRCA1, a breast cancer susceptibility gene in humans, has a conserved homolog in yeast known as RAD9. Previously collected data suggests heterozygous mutations of msh4 and/or msh5 in rad9-deficient strains cause greater genomic instability than in strains mutated for either gene alone. MSH5 associates with MSH4 to facilitate meiotic homologous recombination. Strains homozygously mutated for msh4 and msh5 are being created to observe the effects with complete absence of MSH4-MSH5 protein complex on genomic instability. Future directions include specifying any relationships between RAD9 and MSH4/MSH5 by varying Msh4p/Msh5p dosage in strains mutated for cell cycle checkpoint genes other than RAD9.

P-8: JUSTIN GIBSON, ERIN STROME

Investigation of Genome Instability Due to Mutations in the SAM1 and SAM2 Genes in

Saccharomyces cerevisiae

FACULTY SPONSOR(S): ERIN STROME, BIOLOGICAL SCIENCES

Abstract: The SAM1 and SAM2 genes encode the enzyme S-adenosylmethionine synthetase, which catalyzes the formation of S-adenosyl methionine (AdoMet) from methionine and ATP. AdoMet is conserved in human cells where it maintains its function as a highly reactive methyl donor. The goal of this project is to measure the dosage effects of mutations in these genes on genome stability. This investigation will assist us in determining their combined influence on genome stability and their effect on AdoMet production, for which changes in concentration in human cells has been implicated in genome instability, a phenotype of cancer.

P-9: CHEYENNE HENSLEY

Testing For Loss Of Heterozygosity In A Yeast System

FACULTY SPONSOR(S): ERIN STROME, BIOLOGICAL SCIENCES

Abstract: Loss of heterozygosity (LOH) is frequently observed in cancers. Using a yeast model system we are focusing on gene mutations that increase LOH events at the MAT locus. Using the *Saccharomyces cerevisiae* deletion collection, where all strains are mutant for a different gene, we will allow LOH events to occur and then identify these strains based on their ability to mate with a modified haploid strain. The gene mutations responsible for increased LOH will hopefully reveal pathways important in cancer development.

P-10: TAYLOR STROHMAIER, DANIELLE CONNERS, GABRIELLE SEVILLA, FATIMA MOHMOUD

Impact of mutations in branched-chain amino acid availability genes on genome stability in *Saccharomyces cerevisiae*

FACULTY SPONSOR(S): ERIN STROME, BIOLOGICAL SCIENCES

Abstract: Previously, mutations in genes involved in branched-chain amino acid availability were identified to impact genome stability. For this project, our goal is to identify the full spectrum of genes, within the biosynthetic and transport pathways, resulting in increases in chromosome loss when mutated. Our first goal was the creation of heterozygous deletion strains and analysis for chromosome dynamics. Genes of interest were then chosen for creation of homozygous deletion strains. We have also analyzed altered branched-chain amino acid concentration for media impacts on genome stability. Current research involves continued testing of the full dosage sensitivity of the genes of interest.

P-11: BÁLINT ZSIDAI

Evaluating the impact of ASN2 deletion on TOR activity using quantitative Real-Time PCR

FACULTY SPONSOR(S): ERIN STROME, BIOLOGICAL SCIENCES

Abstract: *Saccharomyces cerevisiae* is a practical model organism for the investigation of gene mutations affecting genome instability, a hallmark of cancer in humans. ASN2 is involved in the amino acid biosynthesis pathway, and deletion of a single or both copies of the gene in a RAD9 checkpoint deficient background has shown significant increases in genome instability. Since TOR acts as a nutrients sensor, deficiency in ASN2 expression may affect the complex. Using qRT-PCR, this study focuses on identifying the effect of ASN2's absence on the TORC1 complex by quantifying the expression of genes (*RPL9A*, *GAP1*, *MEP1*) indicating its activation and inhibition.

P-12: ALYXANDRA COX, ALYSON MCLANE, STEPHANIE GEHRICH, YASMEEN DAHER, ALEXUS RICE, ELIZABETH SLATTERY, DAVID KING

Organic extractions of Antimicrobial compounds from environmental microbes.

FACULTY SPONSOR(S): JOHN CARMEN, BIOLOGICAL SCIENCES

Abstract: New antibiotics are needed to prevent increasing morbidity and mortality caused by infections with antibiotic resistance microorganisms. Antimicrobial activity surveys of environmental microorganisms led to the discovery of many of the antibiotics currently in clinical use. A survey of soil samples taken from various residential locations in the Cincinnati/Northern Kentucky region identified 15 bacterial species with the ability to inhibit the growth of *Escherichia coli* or *Candida albicans*. Organic extractions were performed to isolate the active compounds. The activity of these extracts was determined using the Kirby-Bauer disk diffusion method.

P-13: EMILY IGEL

Anti-viral effect of Cat's Claw extract due to decreased expression of viral entry receptors

FACULTY SPONSOR(S): JOSEPH MESTER, BIOLOGICAL SCIENCES

Abstract: Cat's Claw tea is consumed in South America as a health elixir. We previously demonstrated that human neurons cultured in Cat's Claw extract had decreased expression of entry receptors for dengue fever, West Nile, measles, polio, and herpes simplex viruses. To verify this anti-viral effect, we challenged Cat's Claw treated and untreated neurons with live herpes virus and measured viral entry, as well as overall

infectious yields. Neurons treated with Cat's Claw had decreased levels of viral genomes post-entry and decreased infectious yields. These results support an anti-viral effect of Cat's Claw due to decreased expression of viral entry receptors.

P-14: T. BROOKE KENNEDY, KRISTAL DYSON

The Expression of Hepatitis C Virus (HCV) Genes in Human Liver Cells as a Potential Model of HCV disease

FACULTY SPONSOR(S): JOSEPH MESTER, BIOLOGICAL SCIENCES

Abstract: Hepatitis C virus (HCV) is difficult to study because the virus does not grow well outside of the human body. For this project, HCV genes were inserted into an expression system to create a cell culture model of HCV infection. Expression of HCV genes in human liver cells was verified by real-time PCR. In preliminary experiments, HCV gene expression did not induce apoptosis, as measured by caspase 3 expression, but did induce expression of inflammatory chemokines from liver cells. Further work with this model may lead to a better understanding of HCV disease and promote the development of anti-viral interventions.

P-15: SEAN SHUMATE, ALAN COHEN, MEDICAL MICROBIOLOGY-LAB

Microbial Contamination of World Currencies

FACULTY SPONSOR(S): JOSEPH MESTER, BIOLOGICAL SCIENCES

Abstract: Paper currencies are a potential vehicle for spreading infectious diseases. The impact of contaminated currency on society is unknown, although it has the potential to be medically significant. We surveyed world currencies and found viable levels of bacterial contamination on currently circulating bills, as well as on bills removed from circulation and stored for several months before surveying. Contaminated currency may be an important vehicle for disease transmission, impacting immunologically compromised individuals and potentially enhancing the spread of antibiotic-resistant superbugs.

P-16: EMILY KEENER

Using handheld X-ray fluorescence to quantify the spatial distribution of soil lead in Cincinnati, OH.

FACULTY SPONSOR(S): KIRSTEN SCHWARZ, BIOLOGICAL SCIENCES

Abstract: Elevated levels of lead in urban soils have been the subject of ecological research as well as recent media coverage. Sources of lead to soil systems include the historic use of leaded gasoline and lead-based paints, as well as industry. For this study, we examine potential tradeoffs between elevated soil lead and urban gardening. Several sites in Cincinnati have been tested using handheld X-ray fluorescence analyzers. All residential areas tested demonstrate at least one area in the yard that exceeds the USEPA reportable limit of 400 ppm lead. Future research will examine the relationship between soil lead and land cover.

P-17: ALEXIS SHARP, KYLE CONLEY, EMILY KEENER, KEVIN SCHULTZ

Elevated soil lead levels in Newport, KY: Correlations between soil lead and a historic industrial site.

FACULTY SPONSOR(S): KIRSTEN SCHWARZ, BIOLOGICAL SCIENCES; MICHELE DAY, COMMUNICATION

Abstract: Childhood lead poisoning has long been a major environmental and public health concern. In 2012, USA Today reported on historic industrial sites as potential sources of soil lead. Their investigative report – Ghost Factories – included a site in Newport, KY in operation from 1948 to 1954. Soil testing by USA Today revealed soil lead levels that exceeded the USEPA limit. In a transdisciplinary collaboration with the journalism department at NKU we are re-testing the soil in and around the former smelter site and the surrounding neighborhood to better understand the contribution of the former industrial site to current soil lead burdens.

P-18: JUSTIN CONLEY

Documenting the Flowering Plant Species of St. Anne Wetlands

FACULTY SPONSOR(S): MAGGIE WHITSON, BIOLOGICAL SCIENCES

Abstract: From May to October 2014, I documented the vascular plants (predominantly angiosperms) at St. Anne Wetlands in northern Kentucky. A preliminary list was created for the species collected, including common and infrequent, as well as the native and non-native. This list can be utilized for research or educational purposes and will be uploaded to the Wetlands' website. Voucher specimens were dried, identified, and mounted to become permanent collections in the John W. Thieret herbarium. This study generated 108 specimens and identified 102 species; 6 specimens were duplicates that can be traded with other herbaria. Funds provided by NKU's SURCA.

P-19: MILLICENT FRIMPONG-MANSO

Do cyanobacterial blooms encourage the growth of pathogenic bacteria?

FACULTY SPONSOR(S): MIRIAM KANNAN, BIOLOGICAL SCIENCES

Abstract: Pathogenic bacteria, mainly *Salmonella* and *Staphylococcus* were isolated from blooms of the cyanobacteria *Microcystis* sp. collected

in local ponds in Northern Kentucky. Previous studies have shown that several pathogenic bacteria have been associated with *Microcystis* blooms. We hypothesized that the slime layer covering most *Microcystis* colonies provides a food source that stimulates the proliferation of the pathogenic bacteria. We tested this by growing *Salmonella* and *Staphylococcus* with *Microcystis* with a slime layer and *Microcystis* without the gelatinous covering.

P-20: MICHELLE IMBROGNO, MARK NIENABER, JULIE MOSES, MIRIAM KANNAN

There is an App for that: A user friendly key to the identification of Harmful algae blooms and common cyanobacteria

FACULTY SPONSOR(S): MIRIAM KANNAN, BIOLOGICAL SCIENCES

Abstract: Recent studies have shown an increase in harmful algae blooms caused by cyanobacteria. Cyanobacteria produce toxins harmful to humans and animals. A single toxic bloom can contaminate the drinking water of millions. Accurate identification and immediate response to harmful blooms may significantly reduce negative impacts on human health. It is critical that a key to cyanobacteria identification be simplified and readily available. Results of this study will produce a user-friendly cell phone app to aid in microscopic identification and analysis of the color composition of a bloom. This will alert the user if the bloom is of potentially toxic cyanobacteria.

P-21: HARSH PATEL

Life in Extreme Environments: Diatoms

FACULTY SPONSOR(S): MIRIAM KANNAN, BIOLOGICAL SCIENCES

Abstract: Living organisms known as "extremophiles" live in some of Earth's most extreme environments. They tolerate conditions like hypersalinity, high acidity, high and low temperatures, and teach us about the limits of life. They can potentially help an astrobiologist with methods to detect life on other planets. We describe here a study of diatoms, photosynthetic eukaryotes, growing in extreme environments: a biofilm in a Bahamas cave, a biofilm under ice of a polluted local stream and a hypersaline lake in the Galapagos Islands. We hypothesize some possible adaptations and mechanisms that allow for diatoms to survive under these conditions.

P-22: ALEXUS RICE, STEFANIA GUGLIELMI

Removal of microcystins via bioactive sand filtration systems

FACULTY SPONSOR(S): MIRIAM KANNAN, BIOLOGICAL SCIENCES; STUART OEHRLI, CHEMISTRY

Abstract: In this study we investigated the efficacy of biofilms established in sand filtration systems to remove Microcystin toxins produced by blue-green algae. Sand samples, with established biofilms, were obtained from Greater Cincinnati Water Works and the Northern Kentucky Water District. Columns prepared with the bioactivated sand samples were inoculated with water samples that tested positive for microcystins. After an incubation period the water was expelled from the column, and the eluent was analyzed for toxicity utilizing HPLC-MS. Results showed that the sand filters containing established biofilms removed microcystins significantly better than sterile sand filters.

P-23: BRIAN BUTLER

Identification of Differentially Expressed Genes in Atp13a1 Knockout Mice

FACULTY SPONSOR(S): PATRICK SCHULTHEIS, BIOLOGICAL SCIENCES

Abstract: ATP13A1 is a P-type ATPase transporter of unknown function. Mice lacking Atp13a1 die at approximately embryonic day 16. To gain insight into the function of ATP13A1, DNA microarrays were used to compare global gene expression patterns in wild-type and Atp13a1-deficient embryos. We found 1251 genes were differentially expressed ($p < 0.01$). The PANTHER (protein annotation through evolutionary relationship) classification system was used to identify the function of the differentially expressed genes and the biological pathways most affected by the loss of Atp13a1. This data should be useful for determining the function of this important transport protein.

P-24: ANTHONY W. BAKER

Techniques in Crocodilian Skull Preservation

FACULTY SPONSOR(S): RICHARD DURTSCHKE, BIOLOGICAL SCIENCES

Abstract: To better understand Crocodilian preservation and anatomical structures related to the skull using a specimen skull from Key Largo of the American Crocodile species, we can through cleaning it and reassembling the skull learn about how the skulls of Crocodilians are composed. During the preservation process of reassembling the skull we can learn a great deal of crocodile dentition, as we have to put the teeth back into place. We can also get an understanding of body ratios in Crocodilians such as the dorsal cranial length and its relationship to total body length based on studies found in the literature.

P-25: CASSIE BRENDEN, SARA HOPPENJANS

Impact of Invasive Plant Species on Native Amphibians

FACULTY SPONSOR(S): RICHARD DURTSCHKE, BIOLOGICAL SCIENCES

Abstract: St. Ann Wetlands near Melbourne, Kentucky possesses multiple ephemeral ponds which are of use to a diverse number of amphibians and several invasive plant species. In order to understand the potential impacts of exotic invasives on habitat use by natives, monitoring of amphibians in and near ponds with and without invasives are compared. These comparisons are assessed through application of field techniques and analyzed using statistical analyses. Field methods include catching amphibians from ponds, checking pitfall traps and Hyla tubes, haphazard sampling, marking and releasing of any amphibians collected, gathering physical pond parameters, and evaluating sound recordings of frog calls.

P-26: MOLLY K. DEATON

Development of a Polychotomous Key Application for Smart Devices

FACULTY SPONSOR(S): RICHARD DURTSCHKE, BIOLOGICAL SCIENCES

Abstract: The number of extant animal species on Earth is increasing exponentially, as new species are discovered and described each day. The process of taxonomic classification is crucial to a variety of applications including research, management and conservation. Existing methods of identification rely on use of dichotomous keys to systematically eliminate taxa to determine the correct classification. Development of a polychotomous key would allow users to more efficiently and accurately classify species based on multiple entries including size, shape, color, habitat and other unique attributes. Integrating the key into a mobile application for smart devices will increase accessibility and convenience.

P-27: MARISA J. DERENZO, ALLISON R. LITMER

A closer look into the diet of the introduced Wall Lizard (*Podarcis muralis*) and the assimilation efficiencies from its prey.

FACULTY SPONSOR(S): RICHARD DURTSCHKE, BIOLOGICAL SCIENCES

Abstract: The European Wall Lizard, *Podarcis muralis*, is an introduced species in the Northern Kentucky area. Minor research has been conducted to reveal the exact impact this species has in its new habitat. Non-lethal stomach flushings were performed to uncover the diet, and its prey was identified as *Isopoda*, *Gryllidae*, *Formicidae*, *Lumbricidae*, and other invertebrates. To determine the assimilation efficiencies of this species on dominant prey, single-taxon feeding experiments were performed and caloric values were evaluated through bomb calorimetry. Further research can help uncover the niche occupied by *P. muralis* in its new environment.

P-28: JENNA L. GRAHAM

The Characterization of Leachates of Allochthonous Litter from the Invasive Chinese Lespedeza and Their Potential Impacts on Anuran Larvae

FACULTY SPONSOR(S): RICHARD DURTSCHKE, BIOLOGICAL SCIENCES

Abstract: The Chinese Lespedeza (*Lespedeza cuneata*) was introduced for soil management. For this study leachates from allochthonous litter from the St. Anne Wetlands in Melbourne, KY were tested for their toxicity to the tadpoles in ephemeral ponds. We soaked leaves, seeds, and the whole plant sections in Milli-Q water for 48 hours to create leaf teas. We identified the organic and inorganic chemicals in the tea with colorimetric methods. Phenolics and tannins were determined with a Folin-phenol reagent based on blue tint color associated with different concentrations, and inorganics were evaluated with an inductively coupled plasma – optical emissions spectrometer.

P-29: MICIAH OCASIO

Development of allometric equations for the invasive Callery (Bradford) pear

FACULTY SPONSOR(S): RICHARD BOYCE, BIOLOGICAL SCIENCES

Abstract: In our region, Callery pear (also known as Bradford pear) has recently emerged as an invasive species. However, little is known about its physiology or ecology. We gathered data for allometric equations, which give biomass of different tree components based on diameter measurements. We destructively sampled 8 trees of different sizes on the edge of NKU's campus. Logarithms of component weights were regressed against logarithm of diameter, while height was regressed against diameter, yielding equations with R² values usually above 0.90. These equations will be used by ecologists to quickly and easily estimate biomass of this invasive species.

P-30: DONNA SNYDER, KIM ZEIGLER

LighthousePage: Enhancing Lives for Children and Youth with Disabilities, Their Families and Their Educational Teams.

FACULTY SPONSOR(S): ZAC STROBL, BUSINESS INFORMATICS

Abstract: LighthousePage is an interactive, real-time communication application used to connect home and school for children and youth with special needs. LighthousePage is a digital space where everybody on the student's Individualized Educational Plan can communicate in real time, share important documents, post pictures and videos to collaborate with goals, share successes at home and school, replace the outdated

binder, post upcoming draft IEP's, share high interest information as well as topics of conversation, aggregate information from year to year on a timeline, and share information from year to year to help with transitions. LighthousePage is portable to take all the valuable collected information right to adult services.

P-31: NATE SHIELDS, LANE PADGETT, HANNAH UTTERBECK, JAMES RUHLMAN
Using Geophysical Methods to Identify Potential Subsurface Storage and Drainage Patterns

FACULTY SPONSOR(S): THOMAS BRACKMAN, CENTER FOR INTEGRATIVE NATURAL SCIENCE AND MATHEMATICS

Abstract: There could be a great potential for water collection from natural springs in the Northern Kentucky area. The subsurface in Dry Ridge, Kentucky bears the capability to host potential water storage that can be accessed via conduits that serve as a temporary "spring." Using geophysical methods such as Electrical Resistivity and Refraction Microtremor, subsurface water storage potential can be measured. Collected data can then be modeled to construct an interpretation of the subsurface. Results will be presented.

P-32: RICHARD MCLANE, JACOB TELESZ, MAXWELL BOYLE

Progress toward the structure activity relationship of a new diarylheptanoid

FACULTY SPONSOR(S): AMBER ONORATO, CHEMISTRY; JOSEPH MESTER, BIOLOGICAL SCIENCES

Abstract: Inflammation is the body's protective response to injury and infection, but can also lead to significant damage to the body. Diarylheptanoids (DAHs) are a class of natural products that have anti-inflammatory properties. Curcumin, a diarylheptanoid found in turmeric, is a powerful anti-inflammatory agent, but can also be toxic when used in high doses. Recently, DAH 1 was isolated and found to possess moderate anti-inflammatory activity. This research proposes the synthesis of a series of analogues for evaluation against inflammation with decreased toxicity. As the molecules are made, *in vivo* and *in vitro* testing will begin to measure their anti-inflammatory activity.

P-33: BRANDON WIEFERING, LUCAS EDELEN

Efforts Toward the Total Synthesis of Microcyclamides MZ602 and MZ568

FACULTY SPONSOR(S): AMBER ONORATO, CHEMISTRY; JOHN CARMEN, BIOLOGICAL SCIENCES

Abstract: Naturally occurring cyclic peptides containing thiazole-modified amino acids have become more prevalent and contain a variety of biological activities. One drawback of natural products is the insignificant amounts recovered after isolation, which reinforces the need for an effective synthesis route. The initial efforts toward the multistep synthesis will be presented. Nuclear magnetic resonance (NMR) was used to analyze the products and upon confirmation the reactions were optimized. Once the final compounds are achieved, Dr. John Carmen's group of the NKU biology department will test them for antifungal activity.

P-34: NICOLE ARDUSER, ALYSIA KOHLBRAND, GRANT FOREMAN

Explorations on the Nanoscale with a DIY Atomic Force Microscope

FACULTY SPONSOR(S): CELESTE MORRIS, CHEMISTRY

Abstract: We present activities to teach students about atomic force microscopy, including creating a classroom model and a DIY Atomic Force Microscope developed by Edwin Hwu, Academia Sinica, Taipei, Taiwan for explorations on the nanoscale. This research focuses on emerging technologies and materials to use as learning tools to teach concepts about scale, force, and topographic and scanning probe microscopy imaging.

P-35: MICHAEL CHIA, NICOLE ARDUSER

Microscale Water Quality Analysis Systems

FACULTY SPONSOR(S): CELESTE MORRIS, CHEMISTRY; RICHARD DURTSCHKE, BIOLOGICAL SCIENCES

Abstract: This work focuses on the development and application of integrated water quality analysis probes. Individual probes exist on the market, however, one integrated, efficient, and inexpensive probe is not available. This project seeks to design an integrated pH, temperature, conductivity, turbidity, and dissolved oxygen probe that would be easily transportable and directly upload results to the EPA water analysis system. We present a pH probe fabricated from aniline electropolymerization on gold substrates, a T-type thermocouple, LED-based turbidity sensor and a conductivity sensor. Arduino technology was utilized to design a durable device that is easily accessible to the public, and combines all these probes to vastly improve the frequency and remediation of water sources.

P-36: HANNAH HUGHES, ADAM HOFFMANN, ROLF FOWEE, DARCY POOR, JACOB SHAFFER, ANDREW HALL

Toxicity Evaluation of Doxorubicin Loaded Poly(butylcyanoacrylate) (PBCA) Nanoparticles on Supported Lipid Monolayers and Bilayers with Atomic Force Microscopy and Confocal Fluorescence Microscopy

FACULTY SPONSOR(S): CELESTE MORRIS, CHEMISTRY; KRISTI HAIK, BIOLOGICAL SCIENCES

Abstract: The interaction between Polysorbate 80-coated Poly(butylcyanoacrylate) nanoparticles (PBCA NPs) loaded with doxorubicin and without doxorubicin with lipid models of the blood brain barrier (BBB) was evaluated using Langmuir Blodgett monolayer techniques, atomic force microscopy and confocal fluorescence microscopy. Results indicate that PBCA NPs loaded with doxorubicin disrupt the composition of the liquid condensed (LC) and liquid expanded (LE) phases of the 1,2-dipalmitoyl-sn-glycero-3-phosphocholine (DPPC) lipid monolayer. The disruption is concentration dependent and increased for PBCA NPs with doxorubicin. This approach provides valuable information to assess nanoparticle toxicity for drug delivery to the brain.

P-37: THERESA RUWE

Development of a Nanoscale Calcium-Selective Electrode

FACULTY SPONSOR(S): CELESTE MORRIS, CHEMISTRY

Abstract: Calcium (Ca^{2+}) plays an integral role in physiology and healthy cellular function to control neurotransmitter release, and heart and muscular contractions. Ca^{2+} detection in the blood requires blood draw followed by a laboratory test with a delay time between analysis and results for both medical professionals and patients. We present a nanoscale Ca^{2+} -selective electrode sensor for immediate measurement of Ca^{2+} levels in blood. Electropolymerization of a calcium-selective molecule (calcium ionophore) onto a polyaniline film on glassy carbon electrodes will be presented as the first step toward nanoscale sensor fabrication.

P-38: EMILY KAPPEL

Size Determination of $\alpha\beta$ and A-repeat Protein Regions of the Accumulated Associated Protein

FACULTY SPONSOR(S): DIANA MCGILL, CHEMISTRY

Abstract: *Staphylococcus epidermidis*, an often non-pathogenic bacteria found on skin and nasal passages, can form a slime-like matrix, called a biofilm, on surfaces such as surgical implantations and catheters. This bacteria is responsible for significant numbers of hospital-associated infections. The Accumulated Associated Protein (Aap), responsible for biofilm formation, contains three distinct structural regions: B-repeat, $\alpha\beta$ and A-repeat (Arpt). This study focused on developing techniques to characterize the size of purified samples of the $\alpha\beta$ and Arpt regions. SDS-PAGE analysis was used to understand the anomalous migration behavior exhibited by Arpt. Certain gels were found to be better suited for a defined migration pattern and protein region size.

P-39: AMNEH ALZATOUT

Heparin detection using cationic lysine and arginine compounds

FACULTY SPONSOR(S): KC RUSSELL, CHEMISTRY

Abstract: Heparin is widely used as an anticoagulant in numerous clinical procedures. Proteins that recognize heparin have binding sites utilizing the amino acids arginine and lysine. Currently, the direct detection of heparin in undiluted blood is not possible. This research aims to find better ways to detect heparin using cationic lysine (**1**) and arginine compounds (**2**). The long carbon chain esters or amides in these molecules will allow them to be incorporated into polymers that can be used in sensors selective to heparin. This poster will describe the progress towards the synthesis of these compounds.

P-40: EMMA GORDON, ANDREW SABELHAUS, MARY KATHERINE MILLER

Pulsed Chronopotentiometric Polyion Sensor for Screening an Antidote for Low Molecular Weight Heparins

FACULTY SPONSOR(S): KEBEDE GEMENE, CHEMISTRY

Abstract: Heparin and protamine are widely used as anticoagulant and antidote, respectively, during surgical procedures. However, neither of them is efficient and safe. Heparin often causes bleeding complications while protamine often causes severe adverse reactions. Therefore, finding safer anticoagulants and their antidotes has been of particular interest for health care applications. Recently, low molecular weight heparins (LMWHs), have been introduced as more efficient and safer anticoagulants. However, they lack convenient antidotes. Here we use reversible polyion sensors to screen antidotes for LMWHs by monitoring anticoagulant-antidote binding affinities. Synthetic or natural polypeptides will be screened as potential antidotes for LMWHs.

P-41: SIMON SEGAL, ANDREW SABELHAUS

Pulsed Chronopotentiometry with Ion Selective Electrodes for the Simultaneous Measurement of Extracellular and Intracellular Potassium

FACULTY SPONSOR(S): KEBEDE GEMENE, CHEMISTRY

Abstract: Potassium is vital in our nervous and cardiovascular systems. Knowing the exact level of both intracellular and extracellular potassium is of high importance for health care applications. The techniques that

are currently used for measurement of potassium in blood, classical potentiometry and flame photometry, have limitations for simultaneous extracellular and intracellular potassium measurements. Thus, the purpose of this research project was to develop a novel electrochemical sensing technology, pulsed chronopotentiometry, as an effective method for the measurement of extracellular and intracellular potassium ions in whole blood simultaneously.

P-42: SIMON SEGAL, SARA KESHTVARZ, ADAEZE ILOGBUNAM

Measurement of Physiological Chloride and Bicarbonate with Pulsed Chronopotentiometry for the Determination of Anion Gap

FACULTY SPONSOR(S): KEBEDE GEMENE, CHEMISTRY

Abstract: Anion Gap (AG) is clinically important for the identification of the cause of metabolic acidosis. It refers to the concentration of all unmeasured anions in plasma. It is calculated from the difference between measured concentrations of cations (sodium and potassium) and anions (chloride and bicarbonate). Due to the availability of selective ionophores, sodium, potassium and chloride concentrations can be measured with their respective ion-selective electrodes. Bicarbonate, however, has no known ionophore, making measurement challenging. The goal of this research was to measure total concentration of physiological chloride and bicarbonate, and thus AG, using pulsed chronopotentiometry with ionophore-free anion responsive electrodes.

P-43: JASON CALLIHAN

Synthesis of polymers and their subunits that incorporate fullerenes and transition metal chromophores

FACULTY SPONSOR(S): KEITH WALTERS, CHEMISTRY

Abstract: Our group has been focused for several years on supramolecular systems that incorporate fullerenes and transition metal chromophores with specific interest in their photoinduced excited state behavior. We have completed studies on our initial small molecule systems containing these two units and continue to develop modified systems that can be used as building blocks for polymers. This poster details recent efforts to explore multiple protecting group reactions on these building blocks to allow for the controlled addition of each subunit with minimal side products. Polymer synthesis was followed with Gel Permeation Chromatography to determine final polymer size. These foundational studies will allow for the more rapid advancement of our polymer efforts.

P-44: DUSTIN KHOURIE, DOUG ABBOTT

Halogenated Catechol Derivatives: A Facile Entry into Dehydrobenzoannulenes with Diverse Applications.

FACULTY SPONSOR(S): KC RUSSELL, CHEMISTRY

Abstract: The Russell Research Group is focused on the synthesis of dehydrobenzoannulenes (DBAs) which can be incorporated into larger systems including covalent organic frameworks (COFs), covalent inorganic frameworks (CIFs) and oxacalixarene-annulene hybrids. COFs and CIFs are of interest for their gas storage and catalytic properties. Because of their lightweight and flexible nature COFs are promising organic semi-conductors. Oxacalixarene-annulene hybrids will provide a unique platform to examine molecular interactions including aromatic-antiaromatic pi-pi interaction not available to other systems. This poster will show our progress in preparing halogenated catechol compounds and how those compounds are integrated into annulenes.

P-45: SARAH SIEMER, JASON CALLIHAN, HANNAH HEARN, CHAD BENEKER, JESSICA HORN

Studies on Polymers and their Subunits that Incorporate Fullerenes and Transition Metal Chromophores

FACULTY SPONSOR(S): KEITH WALTERS, CHEMISTRY

Abstract: A focus of our group has been on supramolecular systems that incorporate fullerenes and transition metals that have unique photoinduced behavior. While we have successfully completed spectroscopic studies on small molecules with these two units, there is still much to study regarding modifications of these to create polymer building blocks. This poster provides comprehensive spectroscopic data on some building blocks and their ensuing polymers at various temperatures. This data will be compared to previous systems to better understand if our new molecules exhibit similar excited-state behavior. Preliminary interpretation suggests that they show enhanced behavior when compared to the small molecule systems.

P-46: CHELSEA SOWARD, CARLOS ESPINOSA, RYAN FIELD, MELANIE COUCH

(4,5)-Bisarylethynylcatechols: Precursors for oxacalixarenes and expanded covalent organic frameworks.

FACULTY SPONSOR(S): KC RUSSELL, CHEMISTRY

Abstract: The Russell Research Group is interested in preparing (4,5)-bisarylethynylcatechol compounds that can be incorporated

into oxacalixarenes and novel covalent organic frameworks (COFs). Oxacalixarenes are of interest because of host-guest properties that can be used for molecular recognition. COFs can be used for catalysis and potentially gas storage. Sonogashira reactions involve the palladium catalyzed sp-sp² coupling reactions between terminal alkynes and vinyl or aryl halides. The incompatibility of phenolic groups with Sonogashira coupling creates a synthetic challenge in the preparation of the target compounds. This poster will show how acylated catechols can be used to overcome this difficulty to prepare ethynyl catechols.

P-47: NICOLE BRUSMAN, EMILY HOGLE, LINDSEY SNIDER, REID KLINE, BENJAMIN HAIM, EDWARD J. MERINO

Molecular Docking of Isoform-Selective Histone Deacetylase 2 (HDAC2) Inhibitors

FACULTY SPONSOR(S): LILI MA, CHEMISTRY

Abstract: Histone deacetylase inhibitors triggers cell growth arrest, differentiation, and/or apoptosis in various cancers such as lung, prostate, breast and bladder. Molecular docking predicts the most likely conformation of ligands in a receptor binding site and thereby identifies key intermolecular interactions. In this study, a series of small molecules based on a marine natural product was designed and docked into histone deacetylase 2 (HDAC2) active site in order to identify potent inhibitors. These compounds were also docked into other histone deacetylase isomers to evaluate their selectivity. The docking results were used to guide the synthesis and optimization of these HDAC2 inhibitors.

P-48: ALMA OÑATE

Histone deacetylase (HDAC) inhibitors containing thioamide: Synthesis and biological evaluation

FACULTY SPONSOR(S): LILI MA, CHEMISTRY

Abstract: Histone deacetylase (HDAC) is a type of metalloenzyme that removes acetyl groups from histone proteins found within DNA, therefore making DNA inaccessible for transcription. Research has shown that inhibition of HDAC triggers growth arrest, and differentiation/apoptosis in many types of tumor cells. HDAC (except class III) are known as Zn-dependent enzyme, therefore it is expected that inhibition of HDAC will be enhanced with a sulfur-containing group. Herein we describe our recent findings in the identification, optimization, and synthesis of thioamide HDAC inhibitors. These compounds were predicted to have stronger coordination between sulfur and zinc atom compared to their amide counterparts.

P-49: CEILIDH AHEARN, EMILY WAGNER, TAYLOR KIDD, RYAN GAHERTY

Concentration and solvent dependent photochemistry of progesterone

FACULTY SPONSOR(S): PATRICK HARE, CHEMISTRY

Abstract: Progesterone is a naturally produced hormone that is increasingly found in surface waters. High concentrations of it have been shown to cause intersexualization in fish. The photodegradation of the molecule was studied quantitatively in several solvents using UV/Vis spectroscopy. Solvent and concentration dependent rates to the photodegradation were found.

P-50: PATRICK FLYNN ASHLEY

The Effects of Teacher Confirmation and Immediacy on Student-To-Student Interaction and Outcomes for Higher Education

FACULTY SPONSOR(S): ANDREA LAMBERT SOUTH, COMMUNICATION; AUSTIN LEE, COMMUNICATION

Abstract: Teacher communication behaviors in the classroom have been found to have significant outcomes for college students and higher education. The current study investigates and hopes to find a positive connection between the effect of teacher confirmation and teacher immediacy in the classroom on multiple outcomes for higher education including student-to-student interaction in and out of the classroom, satisfaction with the university, anticipated retention rate for students, and anticipated alumni participation upon graduation.

P-51: PATRICK FLYNN ASHLEY, DANIEL CIESLAK

Glassdoor.com: An Insight Into Positive and Negative Workplace Factors

FACULTY SPONSOR(S): AUSTIN LEE, COMMUNICATION

Abstract: It is important for prospective employees to have an accurate picture of their career opportunities. Glassdoor.com helps job seekers find the right company for them by offering a database of 6 million company anonymous reviews from current and former employees. From those reviews, this study will analyze the pros of cons of working for 300 randomly selected employers. Based on Herzberg's motivation-hygiene theory, we expect that certain factors in the workplace (e.g., achievement, personal growth) will cause job satisfaction, while a separate set of factors (e.g., job security, salary) will cause dissatisfaction.

P-52: CASEY BINDER, BRIAN EMBRY

The Influence of Financial Literacy on Student Persistence

FACULTY SPONSOR(S): AUSTIN LEE, COMMUNICATION

Abstract: This study will explore the financial literacy of first-generation college students in the Norse Advising department at NKU, and their retention the following semester. The financial literacy of college students is important to study because debt and poor financial decision making can negatively impact persistence and retention. Financial literacy will be measured by a questionnaire with questions pertaining to student loans, debt, and interest rates. First-generation students are more likely to begin college with issues pertaining to family support, academic preparedness and financial understanding. The variables of gender, race and family income will also be studied.

P-53: ARIELLE GOLDBERG

The Role of Technology in Player Experience and Ongoing Popularity of Nintendo's the Legend of Zelda Series.

FACULTY SPONSOR(S): AUSTIN LEE, COMMUNICATION

Abstract: Nintendo Co., Ltd., has created some of the most iconic video games in the world: Super Mario Brothers, Donkey Kong, the Legend of Zelda. Boasting a 100+ year history, Nintendo is now the world's largest video game company by revenue, and has stayed relevant in the fast-paced gaming industry by pairing their beloved character suite with technological innovation. From Game & Watch to Virtual Boy and eventually the Wii, Nintendo pushes the envelope and forces its competitors to keep up. This paper provides an historical overview of Nintendo's impact on the technological landscape of video games through the lens of the Legend of Zelda series.

P-54: JESSICA SPENCER, ROBBIE VALERIUS, DANIEL CIESLAK

Social Networks and Support Seeking Among First Generation College Students

FACULTY SPONSOR(S): AUSTIN LEE, COMMUNICATION

Abstract: First generation college students often struggle with adjusting to the college climate. In this study, we aim to analyze the networks of first generation and non first generation college students in order to see how networks and support seeking strategies lead to their academic success and social integration. A survey will be conducted to explore and distinguish network modes (face-to-face vs. social media), network strength, and network content including different types of social support. We hope to find out if online social network and computer-mediated support seeking strategies are effective for college academic and social integration outcomes.

P-56: KEVIN SCHULTZ

Multimedia Journalism: Using Digital Tools to Enhance Environmental Reporting and Storytelling

FACULTY SPONSOR(S): MICHELE DAY, COMMUNICATION

Abstract: This project examines the impact of digital journalism tools on environmental reporting. I began by establishing an environmental beat through the publication of stories in Northern Kentucky University's student-run news organization, The Northerner. My coverage produced 14 stories on topics ranging from recycling initiatives to urban forest preservation. I experimented with more than 20 technological tools, including data visualization, augmented reality, video, and interactive quizzes to enhance my projects, and I documented my research and experiences on a blog. Finally, I assessed the university's efforts to fulfill its responsibility as an environmental steward and opened a community dialogue about sustainability.

P-57: KEVIN SCHULTZ, ALEXIS SHARP, KYLE CONLEY, EMILY KEENER

Science Meets Journalism: Reporting Project Crosses Disciplines to Explore Soil Lead Contamination in Newport

FACULTY SPONSOR(S): MICHELE DAY, COMMUNICATION; KIRSTEN SCHWARZ, BIOLOGICAL SCIENCES

Abstract: This multimedia journalism project explores the potential health risks posed by lead contaminated soil in the Westside neighborhood of Newport, Ky. Journalism student Kevin Schultz used soil lead tests conducted by NKU biological sciences students and faculty, along with independent analysis of public records and data and dozens of interviews with both lead experts and community members to produce this project for publication in regional and national media. The report follows up on a 2012 USA Today investigation called "Ghost Factories" that identified the site of a former Newport smelting plant as containing elevated levels of lead in the soil.

P-58: KRISTINE KRUER

Making it Happen: Collection of Perspectives from Women Rocking the Music Scene

FACULTY SPONSOR(S): SARA DRABIK, COMMUNICATION

Abstract: Throughout recent history, there has been an effort to combat the concept that women are not as capable as men in specific fields. Within the music scene, stigmas about women instrumentalists commonly arise. How can the community address these stereotypes? This research will begin to investigate the struggles that women musicians face and how they overcome those complications, celebrate achievements that

they have accumulated, and observe the relationships between musicians and their audiences. The hope for this documentary is to influence novice women musicians to take more initiative despite negative stigmas against them based on their gender.

P-59: SARAH KELLAM

First Ladies and Their Effects on the Presidency

FACULTY SPONSOR(S): STEVEN WEISS, COMMUNICATION

Abstract: This research examines how First Ladies of the United States had an influence on the presidencies of their husbands and affected the political image perceived by the public. Multiple factors were scrutinized to determine the definition of a good First Lady. These women were divided into groups of approximately ten and evaluated on the accomplishments made while they were in this position, their influences on varying platforms, how their presence in the public's eye, their fulfillment of their duties, and the contributions that they made to the presidency overall. Their significance to the success of their husbands was evaluated accordingly.

P-60: NANCY CURTIS

The Representation of Race and Gender in Television & Film and Consumer Reaction

FACULTY SPONSOR(S): YASUE KUWAHARA, COMMUNICATION

Abstract: This project looks into the representation of race and gender in both television and film. It traces the historical changes as well as the current state of representation. My hypothesis is that the representation of race has become better while the representation of gender, specifically women, has only slightly improved. All in all, however, both have a long way to go before the two forms of mass media will achieve a balance in racial and gender representation. The project also looks at the audience reaction to the representation of minorities in Hollywood. I will conduct research on how the audience feels about diversity and also a lack of it in TV and film.

P-61: KELSIE BROWN, ARNELA ZEKIC, CAROLINA MARINI, JESSE HOCKENBURY, MORGAN LYONS, KATHERINE OLLIER

Communicating the Benefits of Alternative Transportation Options:

A Transdisciplinary Approach to Decreasing Air Pollution in the Ohio River Valley

FACULTY SPONSOR(S): ZACHARY HART, COMMUNICATION; CHRIS CURRAN, BIOLOGICAL SCIENCES

Abstract: As part of an EPA P-3 grant project, Biological Sciences and Communication students with the help of the Center for Applied Informatics are seeking solutions to the air pollution problem in the Ohio River Valley region. Through the development of an interactive website and a smart phone app, NKU students, faculty and staff will compare their current commuting habits against alternative options of taking public transportation or carpooling to campus. These tools are part of a communication campaign that will show possible financial, ecological and personal rewards of alternative transportation options, thus incentivizing users to adopt more sustainable commuting habits.

P-62: MATTHEW BECKERICH

Fast Algorithms for Finding Dominating Sets in Networks

FACULTY SPONSOR(S): ALINA CAMPAN, COMPUTER SCIENCE; TRAIAN MARIUS TRUTA, COMPUTER SCIENCE

Abstract: In a network (graph) it is sometimes necessary to find a subset of nodes, as small as possible, that is capable of reaching the complete node set, through its direct connections to its neighbors. This set is known as a Minimum Dominating Set. With the advancement of technology this has become increasingly relevant to many fields. We worked on the creation of algorithms capable of finding good approximations for the solution to this problem and we compared them with other existing algorithms. We found experimentally that our algorithms were capable of delivering good results reasonably quickly against graphs with more than ten thousand nodes.

P-63: TYLER SCRANTON, MATTHEW DORNBUSCH, KATHERINE OLLIER, SARA GILES, ROBERT KELLISON, SPENCER TAYLOR

Mapping Spatial Distribution of Honeysuckle through Using High Resolution Remote Sensing Technique

FACULTY SPONSOR(S): HONGMEI WANG, COMPUTER SCIENCE

Abstract: Honeysuckle is an invasive species in North America forests. On-site survey of honeysuckle distribution is impractical for large forested areas. This project aims to provide an efficient method for mapping honeysuckle spatial distribution through use of high-resolution remote sensing techniques. The test field is Middle Creek Watershed in Kentucky. 2m resolution World-View2 data was acquired in Nov. 2013. Honeysuckle density data over numerous sampling sites were collected in Nov 2013 and 2014. The remote sensing data was classified as a honeysuckle distribution map by use of part of the sampling data as training data. Results display honeysuckle distribution well.

P-64: TYLER SCRANTON, MATTHEW DORNBUSCH, KATHERINE OLLIER, SARA GILES,

ROBERT KELLISON, SPENCER TAYLOR,

Honeysuckle Coverage Density Measurement by Using Line-Intersect Method

FACULTY SPONSOR(S): HONGMEI WANG, COMPUTER SCIENCE

Abstract: Honeysuckle is an invasive species that is becoming a large problem in many local parks due to its rate of growth. This study focuses on measuring its density. Data collection took place in Middle Creek Watershed, KY during fall 2014. Our previous study took photos to estimate its density, which underestimated the density. Using an on-site line-intersect method to measure the density of honeysuckle, more accurate readings can be gained. Data was collected at various sites consisting of low, medium, and high densities. The resulting data is used for training and validation purposes of honeysuckle mapping in the study area.

P-65: MATTHEW BECKERICH

Evaluating the impact of Microsoft IIS vulnerabilities

FACULTY SPONSOR(S): JAMES WALDEN, COMPUTER SCIENCE; MAUREEN DOYLE, COMPUTER SCIENCE

Abstract: Microsoft's Internet Information Server (IIS) is deployed on over 20% of all web servers, including some in the state of Kentucky. Old versions of IIS expose users to an average of eight vulnerabilities per version according to Microsoft Security Bulletins and the Common Vulnerabilities and Exposures (CVE) database. One vulnerability of particular note was CVE-2009-1535, which affects Microsoft-IIS servers from versions 5.0 to 6.0. Using this flaw, hackers can grant themselves control over the device and then steal or destroy any data it contains. Through mining Internet-scale network port scan data, we identified versions and locations of IIS servers throughout the entire IPv4 space. We found that old versions of Microsoft-IIS are deployed on many servers.

P-66: ROBERT CRAWFORD

Discovery of Weak Points in the Global IP Address Space

FACULTY SPONSOR(S): JAMES WALDEN, COMPUTER SCIENCE; MAUREEN DOYLE, COMPUTER SCIENCE

Abstract: We mapped vulnerable network devices across the state of Kentucky by mining Internet scale scan data and geolocating these devices using their IP addresses. We focused on Cisco network routing devices running Cisco's Internet Operating System (IOS) versions 15.1-15.4. While most people don't have such devices in their homes, their network data packets are being routed through one of these pieces of hardware before they reach their destination. Globally, our mining found 19,141 devices running vulnerable versions of IOS, 92 of which were found in Kentucky.

P-67: AUBREY FRANZEN, KATIE SCHWEGMAN, DEBORAH BURGESS

A Comparison of Two Strategies to Prevent Starvation in a Priority Queuing System

FACULTY SPONSOR(S): JAMES MCGUFFEE, COMPUTER SCIENCE

Abstract: A circular round-robin queue is used to give processes equal access to a shared resource for a specific amount of time. In a priority queueing system, multiple levels of queues are used. One potential problem with a priority queueing system is starvation (i.e. some processes may never have access to the shared resource). In this project, programs were written in Java to simulate two distinctly different ways to prevent starvation for two, three, and four level priority queueing systems. The goal of this research is to determine the relative strengths of each starvation prevention strategy.

P-68: DAVID HORTON, JAMES WALDEN, MAUREEN DOYLE

Data-Driven Labs for a Security Survey Course

FACULTY SPONSOR(S): JAMES WALDEN, COMPUTER SCIENCE; MAUREEN DOYLE, COMPUTER SCIENCE

Abstract: As large amounts of information security data have become available from lists of millions of cracked passwords to network port scans of the entire Internet, visualization is becoming an essential tool for understanding the security of information and systems. To help students handle large amounts of data and understand visualizations, we developed labs emphasizing large amounts of data and visualizations of that data for a broad survey course in information security targeted at juniors and seniors at NKU. These labs included the use of a wide variety of different information security data sources to illustrate topics ranging from authentication to malware to network security.

P-69: LAUREN HENSLEY, KIRBY OWENS

Using Convolutional Neural Networks to Detect Features in Rat Brain Images

FACULTY SPONSOR(S): KEVIN KIRBY, COMPUTER SCIENCE

Abstract: As of early 2015, the highest performing machine learning techniques for recognizing objects in images use convolutional neural networks. These networks learn by example, and their architecture mimics features of the visual system in the brain. They are computationally demanding, and we have programmed a variety of neural networks using different tools and languages to test their effectiveness in neuroscience research. In particular, we have built networks to classify images of rat

brain slices to detect changes in the dopamine transport system, using images from the laboratory of Dr. Mark Bardgett, NKU Psychological Sciences department.

P-70: DAVID HORTON

Image Pre-processing Using Machine Learning Techniques

FACULTY SPONSOR(S): MARK LANCASTER, MATHEMATICS & STATISTICS

Abstract: Computer vision is an important and well-recognized field of computer science. Many machine learning algorithms today require an input of gray-scale images in order to further analyze data. This is a problem in the modern world, as most images taken today are in color. For our project, we examined methods of automating the conversion of images to gray-scale with as little user-input as possible. Specifically, we wrote scripts to convert hand-written letters in full color to gray-scale so they could be used as inputs for further processing.

P-71: DAVID HORTON, HUNTER OKA, JARRETT SMITH, NICK STARR

Being Agile in the Bay Area

FACULTY SPONSOR(S): MAUREEN DOYLE, COMPUTER SCIENCE; REES STORM, COMPUTER SCIENCE
Abstract: The Greater San Francisco area is surrounded by a plethora of technological innovations and opportunities. To explore these ideas, a group of students traveled to the Silicon Area and the surrounding cities to learn more about opportunities and professional development in the computer science profession, mostly in the field of Agile development. The following information will further elaborate on the what was learned and what was experienced by the students and the overall takeaway of the trip.

P-72: NATHANIEL HUDSON, JARROD ELLIOTT, CALVIN MCLAIN

Agile Methods in Practice

FACULTY SPONSOR(S): MAUREEN DOYLE, COMPUTER SCIENCE

Abstract: Agile is a methodology in software engineering that arose in the mid-1990s in response to backlash against the traditional waterfall method that had become so standard. The goal of Agile was to allow more flexibility in the software engineering process by a specifically defined set of principles known as the Agile principles. We have investigated companies who claim to be Agile, and determined which Agile principles, if any, they actually abide by. The following presentation is the resulting data gathered from upon traveling to Silicon Valley and interviewing software engineers at top tech companies regarding their use of the Agile principles.

P-73: ROSS BROWN, TODD FRANKLIN, ARCHANA KORI, JOHN LIGAWA

Methodology for Evaluating the Performance of Infrastructure as a Service Resources

FACULTY SPONSOR(S): TRAIAN MARIUS TRUTA, COMPUTER SCIENCE

Abstract: Cloud computing and Infrastructure as a Service (IaaS) continue to gain popularity as means of acquiring computing resources. However, with the increasing number of providers, offerings, service models, and service levels in the IaaS market, businesses need discerning methods of evaluating and comparing these offerings to help them make informed sourcing decisions. We will describe the concept of IaaS and existing research, then propose our own method of evaluating service performance.

P-74: JUSTINE BURCHELL, ANEETA SUHAG, RATNA AKULA, KELI HE

Linguistic Evaluation of Statistical Machine Translation

FACULTY SPONSOR(S): TRAIAN MARIUS TRUTA, COMPUTER SCIENCE

Abstract: Statistical Machine Translation is a rapidly expanding field of study. While a variety of methods, models, and approaches are used to automatically translate one natural language into another, the majority of methods used to evaluate output still require comparisons to human generated translations. We analyzed a commercially available statistical machine translation system on 6 language pairs: (English-Spanish; English-Hindi, and Hindi -Spanish. We report on our experience with manual and automatic evaluation methods, reporting on computational cost, speed, and correlation with both the traditionally-used human created reference translations as well as crowd-sourced reference translations.

P-75: DANIEL GRAVES, ANDREW LIVINGSTON, ADAM TROESCHER, ALEX WENDEL

Analysis of Cloud Storage Providers for Enterprise Readiness Based on Usage Patterns and Local Resources

FACULTY SPONSOR(S): TRAIAN MARIUS TRUTA, COMPUTER SCIENCE

Abstract: Online file sharing and backup has become so ubiquitous that many systems administrators are beginning to consider it for enterprise level file sharing and archival needs. Many file sharing companies claim they can meet the needs requested by enterprises however, after an in depth review of available literature we have found that the only third party analysis of these technologies comes in the form of synthetic benchmarks or theoretical performance metrics. We provide the results

obtained from actual workloads placed on the services. Based upon analysis of the results we determine the enterprise readiness of each cloud storage solution.

P-76: ARNOLD PENNINGTON, MONA ALNAHARI, RUKMANI VIJAYAKUMAR

Mobile Visual Search Technology

FACULTY SPONSOR(S): TRAIAN MARIUS TRUTA, COMPUTER SCIENCE

Abstract: Mobile Visual Search is a new means of searching based on an image captured via mobile phone camera. Many top internet services are investing in visual search technology. Two mobile phone apps, Amazon Flow and CamFind, are examined and compared for accuracy. Three client-server models are presented.

P-77: JOHN NEWMAN

Improving Energy Consumption and Performance of Mobile Applications using the Cloud

FACULTY SPONSOR(S): WEI HAO, COMPUTER SCIENCE

Abstract: This research explores the performance and energy considerations of mobile applications. When developing applications, software engineers need to account for the slower hardware and limited battery that the platform offers compared to traditional computing. Two CPU intensive applications and two network intensive projects will be developed. One from each category will execute solely on the client device and the other from each category will offload CPU/network processes to the Amazon Web Services cloud. Metrics on CPU, network, and energy usage will be compared between all four applications.

P-78: KIRTI SAPRA

Implementing TPC-W Specifications with Google App Engine Services

FACULTY SPONSOR(S): WEI HAO, COMPUTER SCIENCE

Abstract: This independent summer study project was an Google App Engine based implementation of Transaction Processing Performance Council Web Commerce (TPC-W) Benchmark using a NoSQL database, in this case an in-house Google database i.e. Google Java Datastore by deploying an application using Google Web Toolkit for the frontend and servlets as the backend structure. The efficiency of the system was tested by Remote Emulated Browsers that interacted with the website's java servlets and counted the number of servlets or pages they interacted with in a minute and at the end returned the time taken to interact with each servlet in milliseconds.

P-79: BRANDON WEVER

Increasing Performance of Dynamic Websites using Cloud Technology and Data Mining

FACULTY SPONSOR(S): WEI HAO, COMPUTER SCIENCE

Abstract: In traditional client-server architectures there may be a loss in performance due to network request delay, CPU processing time, and database access. The goal of this project is to show how cloud technologies can be used to alleviate network delay and database access time. In order to better serve requests, a clustering algorithm known as k-means can determine most popular requests. This information can be leveraged to store edge caches where the most popular data is stored closer to the end user. The use of cloud infrastructure will allow global scalability without the overhead of hardware setup.

P-80: LEE EPLING, BRANDON HINKEL

Pentest in a Box

FACULTY SPONSOR(S): YI HU, COMPUTER SCIENCE

Abstract: Network security assessments and penetration testing have a reputation of being time consuming, costly, and general difficult. However, not doing a proper security assessment can cause even greater problems when unknown issues lead to a security breach, jeopardizing the existence of the business affected. By using an inexpensive Raspberry Pi and freely available tools, we have created a DIY tool for network security and penetration testing activities.

P-81: ALIA ABDULLAH

Police-Youth Relationships: A Qualitative Analysis of Inner-City Youth's Perceptions of the Police

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; DANA HARLEY, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Youth have considerably more interactions with police as compared to adults. A large proportion of these interactions are negative in nature. Consequently, youth tend to have more negative attitudes than adults. In light of the current distrust of and controversy surrounding police, and their treatment of African American citizens in particular, it is important to gain a better understanding of the factors that shape youth's perceptions of police. This study seeks to examine these perceptions among Cincinnati's intercity youth. Youth will be asked to participate in a Photovoice study and subsequent focus groups to explore their perceptions of police.

P-82: SHAYA HADDEN***Effectiveness of the Kids on the Block Program for Children with Differing Socioeconomic Backgrounds***

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Child abuse, including physical abuse, neglect, and sexual abuse is a great concern for the country. In 2012, there were over 3.8 million reported child abuse cases in the United States. There are many programs to prevent child abuse, including the Kids on the Block school-based prevention program. This program utilizes a puppet show to educate children about child abuse, as well as ways in which they can protect themselves from abuse. The current study seeks to examine the effectiveness of the Kids on the Block program, and whether this effectiveness differs depending on students' socioeconomic status.

P-83: JAIMIE HAMLET***Effectiveness of the Stewards of Children Program***

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Childhood Sexual Abuse (CSA) is a silent epidemic in the United States, causing long-term psychological, emotional and economic effects. Statistics of CSA show that as high as one in four girls and six boys will be sexually abused before age 18. The Darkness to Light Stewards of Children Program is a CSA prevention program designed for adults. This study seeks to examine the effectiveness of the Stewards of Children Program in the Northern Kentucky area. It is anticipated that program participants' knowledge of CSA as well as their child-protective behaviors will increase as a result of the program.

P-84: ANTONNETT HEATH***A Qualitative Examination of Cincinnati Youth's Perceptions of Police***

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; DANA HARLEY, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Black males between 15 and 19 years of age are 21 times more likely to be killed by a police officer than their White counterparts. Much mistrust exists between Blacks and White police officers. Research on adolescents' perceptions of the police has been increasing; however, the majority of it has been quantitative. This qualitative study seeks to examine intercity youth's perceptions of the Cincinnati Police through Photovoice and focus groups. It is anticipated that the following themes will emerge as having an impact on youth's perceptions of police: prior experiences with police, involvement in school, media, race/ethnicity, among others.

P-85: ANNA JOHNSON***Effectiveness of Kids on the Block***

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Child abuse is a worldwide problem. In the United States alone, approximately four to five children a day die from child abuse. The purpose of this study is to evaluate Kids on the Block, a school-based prevention program that utilizes a puppet show to engage second and third graders in a discussion of issues related to child abuse. Specifically, this study examines the effectiveness of the program at increasing children's knowledge of child abuse. By comparing pre and post-tests, results are expected to demonstrate that the Kids on the Block Program is effective at increasing children's knowledge of child abuse.

P-86: LACINDA JONES***In the eyes of our youth: A look at youth's perceptions of police***

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: This study examines perceptions of police among metropolitan teens residing in Cincinnati, Ohio. Extant research on perceptions of police has been primarily quantitative and has focused largely on adults. The current study uses a qualitative, Photovoice methodology to get a better understanding of inner-city youth's perceptions of police. Fifty, primarily African American teens will be given a camera to capture images that represent their perceptions of police. Subsequently, they will participate in audio recorded focus groups to discuss their photos. It is anticipated that three themes will emerge: (1) Prior interaction with Policemen, (2) Neighborhood Violence, and (3) Racial Discrimination

P-87: MAGGIE LINGERICH***Impact of a One-Day Drug Free Summit on High School Students' Perceptions of Marijuana***

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; DANA HARLEY, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Drug use is a growing problem in the United States. Even more disturbing is the age at which individuals start using drugs. Marijuana use in particular has been increasing among youth. 7.1% of high school students use marijuana and even more use alcohol, which subsequently can lead to more serious drug use. It is evident that we need to try to prevent youth from heading down this path. The current study seeks to

evaluate the effectiveness of a one-day Drug Free Summit in influencing high school students' knowledge and perceptions of marijuana. Implications for practice will be discussed.

P-88: TRINA PHILLIPS***Evaluation of the Drug Free Summit as a Method for Altering High School Students' Perceptions of Marijuana Use***

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP; DANA HARLEY, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Adolescent substance use and abuse are serious problems in this country. Extant literature suggests that individuals who initiate substance use at an earlier age are more likely to develop substance abuse problems in early adulthood. The top three substances abused by adolescents are tobacco, alcohol, and marijuana. The current study seeks to examine the impact of a one-day Drug Free Summit on high school students' attitudes about marijuana use. In addition, this study examines whether the Drug Free Summit's impact differs across gender and socioeconomic status. Implications for policy, practice, and research will be discussed.

P-89: REBECCA RUDOWICZ***Perceptions of Hope***

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: This study will examine the perceptions of hope among inner-city youth. Hope is an important construct as it has an impact on youth's decision making and productivity as they contemplate their future direction and goals. The current study will utilize a qualitative, Photovoice methodology to examine what factors represent and contribute to intercity youth's sense of hopefulness. Approximately 50 youth will be given cameras to take pictures of things or people within their environment that represent hope to them. Subsequently, the youth will discuss their pictures within a focus group setting. Implications will be discussed.

P-90: AIMEE STEELE***School Based Child Abuse Prevention Programs: Is Kids on the Block More Effective in Raising Child Abuse Awareness in Urban Students Versus Rural Students?***

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Child Abuse is an ongoing problem in today's society with devastating effects on its victims. The Kids on the Block program is a school based prevention program focusing on raising awareness of child abuse. This study seeks to examine the effectiveness of the Kids on the Block program in raising knowledge of child abuse. Specifically, this study will seek to determine the difference in knowledge gains between urban and rural students. This study expects to find students in rural school districts will have a greater knowledge gain than students in urban school districts.

P-91: THELMA WRIGHT***Cincinnati Youth's Perceptions of Hope: A Qualitative Study***

FACULTY SPONSOR(S): CAROLINE MACKE, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: The current study seeks to examine hope perceptions among Cincinnati inner-city youth. This study is conducted in collaboration with the H3 Cincy Program. The H3 Cincy Program provides educational, recreational and mentoring opportunities for Cincinnati youth. As part of this program, youth will be invited to participate in the current study, which involves the use of PhotoVoice methodology. Specifically, youth will be asked to take pictures of things that represent hope to them. Subsequently, youth will be asked to discuss their photos during focus groups. The findings from this study may greatly contribute to our understanding of hope among adolescents.

P-92: LORI MANGAN***Struggling to Successful: One Northern Kentucky Urban Public School's Journey***

FACULTY SPONSOR(S): DANA HARLEY, COUNSELING, SOCIAL WORK AND LEADERSHIP; JESSICA TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: School environment is vital to student success, and may involve particular challenges in urban public high schools (Hopson & Lawson, 2011). In this study, interviews were conducted with school personnel from consistently improving urban high schools. Those interviews were analyzed for common themes, which were used to create a tool to measure school environment in struggling urban public high schools, including one local high school that employed this tool in a survey of 302 students. Hopson, L., & Lawson, H. (2011). Social workers' leadership for positive school climates via data-informed planning and decision making. *Children & Schools*, 33(2), 106-118.

P-93: HANNAH POWERS, SUK-HEE KIM***Mental Health Court Program Effectiveness in Reducing Recidivism***

FACULTY SPONSOR(S): DAVID WILKERSON, COUNSELING, SOCIAL WORK AND LEADERSHIP; HOLLY RIFFE, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: The Northern Kentucky Regional Mental Health Court Services Program diverts non-violent mentally ill defendants from local detention facilities to provide therapeutic alternatives to incarceration. A key goal of the mental health court program is to reduce criminal recidivism through directly addressing participants' mental health and other basic needs. This research project explores recidivism outcomes 12 months after program exit, among defendants who have successfully completed the program and those terminated from the program. A secondary data analysis of court and mental health program records are reported in aggregate form.

P-94: JACLYN REPLOGLE

Urban Schools and Children's Education on Abuse

FACULTY SPONSOR(S): SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP; KAREN TAPP, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: This quantitative study supports awareness and prevention training program for reducing child abuse and improving the lives of children and families. The purpose of this quantitative study is to identify the relationship between urban schools and children's education on abuse. The study is conducted with 2nd and 3rd graders at elementary schools. The target sample size is 1000 children who were exposed to this program. The appropriate statistical and secondary data analyses, findings, and results will be discussed in this study.

P-95: MICHAEL ADKINS

Does Educational Attainment Impact The Effectiveness of Parental Intervention Programs?

FACULTY SPONSOR(S): HOLLY RIFFEE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: The impact that educational attainment by parents prior to entering into a parental intervention program had on their overall success in the program was examined via a secondary data analysis of standardized pre- and post-test data. The purpose was to understand the impact of education on success in a nation-wide evidence-based parenting program. If parents with lower educational attainment were less successful in the parenting program, modifications of the program could be indicated.

P-96: DANIEL BURNS

Corporal punishment: Parents' perception and behaviors of disciplining their children

FACULTY SPONSOR(S): HOLLY RIFFE, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Previous studies have linked corporal punishment to increases in antisocial behavior, mental health problems, and decreases in self-regulation. The purpose of this quantitative research is to examine the relationship between parents' perception of corporal punishment and their financial stressors. The study analyzes secondary data from the Adult-Adolescent Parenting Inventory pre and post survey administered in a parenting program. The findings will point to necessary modifications in the current curriculum.

P-97: BRANDI FISHER

Understanding the Correlation between Economic Status and Parenting Styles

FACULTY SPONSOR(S): JAMES TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: The socioeconomic environment is a fundamental determinate of health, well-being, and learning across the balance of the life course. It is important for social workers to be conscientiousness of the demographics, including economic status, of the populations we serve in order to better understand the family dynamic. This study seeks to examine the correlation between economic status and parenting styles. Specifically, this study examines the correlation between authoritative parenting, including implementation of corporal punishment, and whether this is related to socioeconomic factors.

P-98: LAURA NORTON

Education Improvements for Behavioral Indicators and Physical Symptoms of Sexual Child Abuse For Caregivers

FACULTY SPONSOR(S): JAMES TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP; SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Approximately 90% of children know their sexual abuser. Sixty-percent of children that are sexually abused are abused by someone that the family trusts, and 30% of children that are abused are abused by a family member. All of these statistics show the need to improve the education of caregivers. Caregivers have a key role in protecting the children and families that they serve. This study examines the effectiveness of the Darkness to Light "Stewards of Children" childhood sexual abuse training program for caregivers of children. This study

expects to find significant benefits for caregivers who partake in the program.

P-99: JESSICA BALDRIDGE

An Analysis of Referrals to the Northern Kentucky Area Development District

FACULTY SPONSOR(S): JESSICA TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: In the state of Kentucky, 39.2% of adults aged 65 or older identify as individuals with a physical or intellectual disability (CDC, 2009). The Aging and Disability Resource Center offers assistance with obtaining services for the aging population and individuals with disabilities in the Northern Kentucky Region. This study examined a sampling of 100 contacts over a three-year span for trends in client demographics. Results were compared to census data to determine if clients are representative of area population demographics. Results will be used by the agency to improve community engagement and promote client diversity and equitable access to services.

P-100: SARAH BRANDENBURGER

The Impact of Team-Based Learning in Social Welfare Policy Courses

FACULTY SPONSOR(S): JESSICA AVERITT TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Policy is the heart of social work practice, and understanding how policy influences clients' lives is essential. Unfortunately, BSW students tend to report a lack of interest in social welfare policy (Henman, 2012). Social work programs must find the most effective ways to teach the concepts of policy, while inspiring students to engage in creating new policy and changing existing policies. This study surveyed 86 BSW students at NKU to determine whether team-based learning increases students' abilities to evaluate the significance of social welfare policy in direct practice settings.

P-101: GEORGE GEORGIEV

Do Years of Work Experience Affect Learning Preferences Among College Students?

FACULTY SPONSOR(S): JESSICA TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Recent studies show that students, during their college careers, become less and less interested in their classes and significantly reduce the time they spent on studying (Howey, 2008). This could lead to the lack of appropriate written communication skills, analytical reasoning skills, and critical thinking skills. This may result in many freshly graduated students having difficulties finding jobs (Howey, 2008). A survey involving 86 BSW students examined whether the amount of work experience predicted the preferred teaching method among the students. The researcher hypothesized that those students with a greater work experience would prefer the team based learning method.

P-102: RACHEL HECK

NKU Hunger Assessment Survey: Tackling Food Insecurity and Health Among Americans

FACULTY SPONSOR(S): JESSICA TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Over 15.9% of Americans experience food insecurity on a regular basis (Feeding America, 2014). Food options for Americans with limited resources are inadequate and may not always be the healthiest. Since health is also an ongoing problem among Americans, it is important to be able to identify a common denominator so that both food insecurity and hunger can be addressed. This survey of 135 NKU students examined how to both minimize food insecurity, and promote healthy habits. Findings from this study will provide insight on foods needed in food pantries to assist with food insecurity and promote good health.

P-103: SHAQUINTA JOY-LOVE

Evaluating Social Welfare Policy Delivery to Better Understand Student Perspectives

FACULTY SPONSOR(S): JESSICA TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: It is important to understand how students learn so that universities can adapt accordingly for better student outcomes. This project examines social work policy curriculum delivery via traditional teaching and team based learning (TBL). Pre and post surveys were administered to 86 students who were enrolled in undergraduate social work social welfare policy courses at NKU. Two sections of the course were delivered using TBL, and two sections were taught using traditional methods. The results of this study are expected to prove that certain demographics to include age have an impact on what learning methods students prefer.

P-104: CHRISTIAN MESSER GAITSKILL

Appalachian Cultural Competency Training for CASA Guardians ad Litem: Effectiveness of Culturally-Specific Training

FACULTY SPONSOR(S): JESSICA TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP
Abstract: Guardians ad litem (GALs) work with children from varied cultures daily, especially those in outlying Appalachian Counties. Culturally-specific information is an imperative and recommended component of effective practice. However, GALs in Appalachia do

not always receive such training. This poster presentation will discuss Appalachian cultural competency training designed for GALs, and the effectiveness of the training with participants. Results show heightened awareness of Appalachian culture following the training as evidenced by pre-test and post-testing of a representative sample of 12 GALs in Clermont County, Ohio.

P-105: EARA NIXON

Are proposed restrictions on Northern Kentucky University's food pantry more frequently suggested by students who are food secure?

FACULTY SPONSOR(S): JESSICA TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: According to the USDA, in 2013 an estimated 14.3 percent of American households were food insecure (USDA, 2013). Northern Kentucky University's food pantry was established to assist the segment of the student population who are food insecure. In order to determine the relevance and need for a food pantry on campus, an electronic survey was sent to NKU students. The survey examined the attitudes of NKU students regarding the food pantry. When analyzing the 135 returned surveys we expect to find that proposed restrictions for the pantry may be suggested more prevalently by students who are food secure.

P-106: L. FAYE PERKINS

Food insecurity among college students: Does geographical location have an impact?

FACULTY SPONSOR(S): JESSICA TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Food insecurity among college students may be as high as four times the national average (Chapparo, Zaghoul, Holck, & Dobbs, 2009; Maroto, 2013). Urban and rural households are more likely to experience food insecurity than suburban households. Prior studies have found that college students living in various regions experience food insecurity at virtually the same rate. This study examines the influence of geographical environment and grocery store access on students' food security. Over 130 NKU students participated in this survey, and the findings will guide development of the university food pantry and impact practices at other colleges.

P-107: FONDA REIS

Making the Connections Between Experience and Policy and Procedures

FACULTY SPONSOR(S): JESSICA TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: It is critical that BSW students understand policy and procedures and how they are dictated by regulating bodies to legitimize agencies. National accreditation enables agencies to receive funding from local, state, and federal sources. Many BSW students approaching an advanced degree lack an interest in social policy (Henman, 2012). However, students with work experience are more likely to see the value and impact of course work. This survey of 86 students at NKU explores the influence of work experience in the field and the correlated values related to learning about social welfare policy.

P-108: JESSICA SCHNEIDER

Does Age Matter? A Study of Hungry Students on NKU's Campus

FACULTY SPONSOR(S): JESSICA TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: In 2011, 46.2 million people in the United States were living in poverty and experiencing hunger (Raphel, 2014). On college campuses surveyed around the country, between 20%-50% of student populations on a given campus were food insecure (Huges et. al., 2011). In 2014, NKU piloted a survey on campus to assess hunger among NKU's population, and the need for a food pantry. This campus has many non-traditional students, making demographics, location, and food preferences important parts of this study. This survey of 135 students aims to identify whether age is a risk factor for hunger on NKU's campus.

P-109: RACHEL SMITHSON

Team Based Learning and Social Work Policy Course

FACULTY SPONSOR(S): JESSICA TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Familiarity with policy and its development heightens a workers' understanding of the effectiveness of policy decisions and change to the practice environment. (Sherraden, Slosar, & Sherraden, 2002). Within the social work curriculum, policy is a required course; however, students regularly report a lack of interest in policy (Henman, 2012). The purpose of this research is to explore how Team Based Learning (TBL) affects the perception of policy within the classroom and the effectiveness of improving students' interest for policy. Pre-and post-surveys were administered to BSW students to determine the best teaching methods for policy courses.

P-110: SARAH SPURLOCK

The Role of Stigma as a Barrier in Northern Kentucky University Students Accessing an on Campus Food Pantry

FACULTY SPONSOR(S): JESSICA TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP;
JAMES TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP;

SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Despite an increase in on campus food pantries across America, many college students are regularly skipping meals or going hungry. Stigma has been speculated to be a potential barrier in college students accessing needed food assistance programs; therefore, this study seeks to examine the role of perceived stigma in the likelihood that Northern Kentucky University (NKU) students will utilize an on-campus food pantry. By using a quantitative survey to compare students' answers, this study expects to find that an increase in perceived stigma will decrease the likelihood that NKU students would find an on-campus food pantry helpful.

P-111: BRIAN STUMP

Stigma as a Barrier to Food Security

FACULTY SPONSOR(S): JESSICA TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: In 2013, nearly 15% of U.S. households lacked access to sufficient food for a healthy, active lifestyle (United States Department of Agriculture, 2014), and there is evidence that college students experience food insecurity at even higher rates (Chaparro, Zaghoul, Holck, & Dobbs, 2009; Patton-López, López-Cevallos, Cancel-Tirado, & Vazquez, 2014). It is important to understand how factors such as stigma may deter students from using campus food pantries. This survey of 135 students seeks to explore stigma as it relates to campus food pantries, and it is expected that some students will confirm embarrassment and shame as barriers to access.

P-112: KIM HAUBNER

A Ray of Hope? Efficacy of the Kids on the Block Program

FACULTY SPONSOR(S): SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP;

HOLLY RIFFE, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Past research has focused widely on the negative impact abuse can have on children. Little attention has been given, however, to whether or not children can identify abuse. The Family Nurturing Center has developed "Kids on the Block"-- a program designed to teach children to recognize abuse. Secondary data analysis was conducted of a pre- and post-test survey. Findings are expected to indicate that children increase their understanding of what constitutes abuse after the program and demonstrate gender-related differences of the child's understanding of abuse.

P-113: KRISTINA KOPP

Children's Knowledge on Child Physical Abuse

FACULTY SPONSOR(S): SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP;

JAMES TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Child abuse is a major problem throughout the United States, and it is vital to educate children to prevent these occurrences from continuing. The Kids on the Block, presented by Family Nurturing Center, is a child abuse prevention program geared towards second and third graders, and consists of a one-hour puppet show with a pretest and posttest. This study seeks to discover what the difference is between girls' and boys' knowledge on child physical abuse, and hopes to find a similar pattern amongst the children's knowledge in order to develop more appropriate and effective prevention education programs in the future.

P-114: SARAH HUME, CHRISTINE KUSCHEL

Breaking Through The Looking Glass: Using Web Based Survey to Investigate the Differences Between Self-Perception and Perception by Others for Pre-Service Individuals in Helping Professionals

FACULTY SPONSOR(S): MARK WASICKO, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: This poster reports on a study of the differences between self-perceptions of undergraduate students exploring careers in teaching and the perceptions of these same students by critical friends. Data were collected on a web site (www.howoldisyour soul.org) of self and critical friends' perceptions on eight dispositional characteristics associated with effective helping professionals - dependable, good friend, sense of humor, considerate, hardworking, role model, caring, and patient - as well as on whether participants found their results helpful in making teaching career decisions and their experience with this research. These data were then analyzed to determine the effectiveness of the approach to providing feedback.

P-115: JAMIE RAABE

The Relationship between Parenting Styles and Abuse History:

A Quantitative Research Study

FACULTY SPONSOR(S): SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP;

KAREN TAPP, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: The purpose of this quantitative study is to examine the relationship between parenting style and their childhood experience. The study will focus on program evaluation and analyze secondary data for the program offered by the Family Nurturing Center. The study

will be using the "Adult- Adolescent Parenting Inventory (AAPI-2) and the research findings will help both to identify risks in parenting style and imply the efficacy of preventative parental education. Further, it is expected the results of this study will illustrate the effect between past traumatic histories of parents and their parenting styles later in life.

P-116: AMANDA BRYANT

Evaluation of a Parent's Own Abusive Disciplinary History and the Influence it has on the Use of Abusive Discipline on His or Her Own Child.

FACULTY SPONSOR(S): SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP;
KAREN TAPP, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Parental disciplinary styles are influenced by several factors, including a parent's own childhood disciplinary history. The purpose of this quantitative study is to examine how an abusive childhood disciplinary history affects future parental disciplinary styles. This study will conduct a program evaluation for the parenting program offered by the Family Nurturing Center through a secondary data analysis of the Adult-Adolescent Parenting Inventory pre and post surveys. The appropriate statistical analysis including t-test and significance level will be tested. The overall findings and results will report the effectiveness of the parental disciplinary style for the adult participants in the parenting program.

P-117: SHANNON BURKE

Understanding the Relationship Between Child Abuse and Parental Military Involvement

FACULTY SPONSOR(S): SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP;
JAMES TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Research reveals that child abuse is less likely to occur in military populations compared to civilian populations. However, there is a need for further research regarding frequency and types of child abuse perpetrated within military families, as well as factors that contribute to child abuse in military families. Secondary data, collected from 500-1000 adult participants of the Family Nurturing Center's "Nurturing Parent" program, will be used to examine the affect military status has on child abuse. This study seeks to identify a pattern among contributing factors of abuse, abuse frequency, and types of child abuse that occur within military families.

P-118: MICHELLE CLOYD

Maternal Parenting Knowledge and its Influence on Child Development

FACULTY SPONSOR(S): SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP;
JAMES TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Single parent homes continue to increase across the United States with statistics reaching nearly 40%. Research illustrates the majority of these homes have mothers as being the head of household. The purpose of this study is to examine how maternal education impacts parenting notions that influence different aspects of child development. Secondary data by the Family Nurturing Center will be utilized to examine this correlation. The findings of this study expect to see a relationship between maternal education level and parenting techniques that lead to increased child development.

P-119: PAMELA DICKERSON

Effects of the Relationship between Parenting Style and the Childhood Experience

FACULTY SPONSOR(S): SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Research has been conducted on different aspects of parenting styles. However, little is known about how childhood maltreatment affects parenting style. In this quantitative study, the relationship between parenting style and childhood experience is examined through the utilization of secondary data obtained by the Adult-Adolescent Parenting Inventory (AAPI-2), offered by the Family Nurturing Center. The purpose of the study is to identify maltreatment as a child and then explore how this experience impacts parenting style with current offspring. The significance level and possible meanings of these findings for research sample will be discussed in this study.

P-120: DAVID DURR

Breaking the Generational Chain of Abuse: The Effectiveness of Nurturing Parenting Programs on Teenage Participants

FACULTY SPONSOR(S): SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP;
HOLLY RIFFE COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Targeted early intervention with teenage populations has the potential to stop child abuse before it occurs. These programs are widely used; however their effectiveness is unknown due to a lack of research. This research examines the Family Nurturing Center's, evidence-based Nurturing Parenting Program. Using secondary data from Adult Adolescent Parenting Inventory derived from pre/post test scores compared to non-teen participants, this research will evaluate the effectiveness of nurturing parenting classes with teenage parents.

P-121: CAMERON GARDNER

The Relationship Between Parental Demographics and Parenting Styles

FACULTY SPONSOR(S): SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: This study aims to explore the relationship between demographic characteristics and parenting styles. Participants in this study are the parents in the Parent Nurturing Program in Kentucky. A measuring instrument, which was adopted from the Adult-Adolescent Parenting Inventory. Quantitative methods were used and secondary data were processed with SPSS. The findings and results were reported to advocate for children and families' necessary transitions in a particular parenting style to improve a child's well-being.

P-122: MEGAN GERBER

The Relationship Between Parental Perspectives and Adolescent Experiences of Maltreatment and Abuse

FACULTY SPONSOR(S): SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP;
HOLLY RIFFE, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Abuse and maltreatment are common themes in research, typically focusing on outcomes such as police or hospital reports and similar formal documentation. While official documentation is important, the dearth of research on the lived experiences of adolescents and adults hampers program design. To address this issue, researchers used the Adult-Adolescent Parenting Inventory – 2 to measure participant attitudes and perspectives. The results of the survey are examined to understand the impact parenting classes have on adult and adolescent attitudes and evaluate the discrepancy in perceptions on parenting.

P-123: ARLEY HAMMONS

The Influence of Discipline from Parents and Childhood Development

FACULTY SPONSOR(S): SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP;
JAMES TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Social emotional development in children is impacted by the bond and attachment they have with their parents. Ninety-percent of a child's brain is developed in the first three years of their life. Social emotional development focuses on the child's behavior and interaction with the world, a very important part of child development. Utilizing attachment theory, the purpose of this study is to examine parenting styles and its impact on child development. Findings from this study are expected to demonstrate that specific parenting styles influence child development.

P-124: MEGAN HATTON

Relationship Between Parental Education Level and Child Discipline Methods

FACULTY SPONSOR(S): SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP;
KAREN TAPP, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Despite a growing body of research that implicates its negative effects on children, there continues to be ongoing social support for corporal punishment amongst Americans. The purpose of this quantitative study is to examine the relationship between parent education level and their choice of discipline methods. The study will be using secondary data from the Adult-Adolescent Parenting Inventory (AAPI-2) survey to conduct program evaluation for the Nurturing Parents program offered by the Family Nurturing Center. The result will demonstrate the differences between parents with high education levels and parents with lower levels regarding their use of discipline methods with children.

P-125: ELIZABETH HAYS

Parent's Income and Level of Education Impacting Child Discipline

FACULTY SPONSOR(S): SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP;
KAREN TAPP, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Little research has been done and there is a growing need for research regarding parents' socioeconomic and educational differences in parenting styles. The purpose of this quantitative study is to explore the effectiveness of parenting style and their socioeconomic and educational differences of the parents. The study will use a secondary data analysis from Adult-Adolescent Parenting Inventory pre and post survey in the program offered by the Family Nurturing Center. The appropriate statistical analyses, findings, and results will be discussed in this study.

P-126: CAITLIN KLEIN

The Effect of Child Abuse on Parenting Style

FACULTY SPONSOR(S): SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP;
KAREN TAPP, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: The purpose of this quantitative study is to examine the relationship between a parent being abused as a child and their own parenting style. The study was conducted using secondary data and Adult-Adolescent Parenting Inventory was adopted to evaluate the effectiveness of the training program offered by the Family Nurturing

Center. The appropriate statistical analysis including the significance level will be tested and the findings and results will be reported in this study.

P-127: M. ROSE LEISRING

The relationships between parents' income and child parentification

FACULTY SPONSOR(S): SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Recent studies suggest that children who are parentified by their parents are encouraged to be emotionally independent and to be the emotional support for their parents. The purpose of this quantitative study is to identify the relationship between parents' economic status and child parentification. The current study uses secondary data from 1000 parents who completed the Adult-Adolescent Parenting Inventory in the program offered by the Family Nurturing Center. The appropriate statistical analyses, findings and results will be discussed in this study. Results from this study will provide helpful information about one possible factor for child parentification.

P-128: STEPHANIE LITTLE

How is socio-economic status related to child abuse?

FACULTY SPONSOR(S): SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: This article describes the results of the effects of socio-economic status and the risks of children being physically abused, neglected, or sexually abused. The purpose of the quantitative study is to examine the effectiveness of socio-economic status and the risks of children being neglected or abused. The study will utilize secondary data from the parenting program offered by the Family Nurturing Center. The study used Adult-Adolescent Parenting Inventory survey administered to participants before and after the program. The result will demonstrate the differences between participant's knowledge before and after the training to explore the effectiveness of the program.

P-129: BRIANNA MCQUEEN

Effects of Gender on Perceived Parenting Styles

FACULTY SPONSOR(S): SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP;

KAREN TAPP, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: This study aims to explore how child's gender is related to perceived parenting styles. Current research shows that boys and girls are subjected to different forms of socialization however, there is a growing need for research regarding how gender specifically influences parenting styles. The purpose of this quantitative research is to identify the effectiveness of gender-driven parenting styles. Quantitative methods and secondary data were used for study analysis. The Adult-Adolescent Parenting Inventory offered by the Family Nurturing Center was adopted as a measuring instrument for this project. The findings and results are expected to be reported in this study.

P-130: SANJA MURGA

The Effects of Parent Gender on Parenting Style

FACULTY SPONSOR(S): SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Parenting style is the manner in which caregivers provide care for children. These various techniques can be interpreted in different ways, depending on caregiver gender. As a result, the present study will explore the effects of caregiver gender on parenting style by analyzing secondary data provided by The Family Nurturing Center. Because there is a growing need for research, this quantitative study will examine differences between gender-specific evaluation of programs and client parenting styles. The study will utilize a secondary data analysis in order to identify patterns in reported parenting techniques to determine which styles are more prevalent among genders.

P-131: SHARON PERRY

Effectiveness of Parental Prevention Education on Child Sexual Abuse

FACULTY SPONSOR(S): SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP;

JAMES TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: In 2012, the U.S. Department of Health and Human Services, Children's Bureau reported a total of 62,715 cases of child sexual abuse (CSA) in the U.S. Research shows 92% of parents want to increase their knowledge about CSA in order to feel more confident in educating their children. This study was done to determine the effectiveness of the Stewards of Children training in educating parents and guiding them to confidently discuss sexual abuse safety with their children. This study expects to find that prevention education is beneficial for parents in improving their CSA knowledge in order to protect their children.

P-132: ANN PETTY

The Relationship Between Socioeconomic Status of Families and Disciplinary Styles for Their Children

FACULTY SPONSOR(S): SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP;

JAMES TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Differences in parent's discipline styles have been related to

several different outcomes with childhood development. Parenting styles may impact children on several domains, including physical and emotional consequences. Several variables may influence parenting styles such as income, education level, stress, social supports and ethnic differences. This study will examine the relationship between the family income level and specific disciplinary styles for their children. Secondary data will be utilized from Northern Kentucky's Family Nurturing Center to examine the potential influence of income on parenting styles.

P-133: ANDREA REED

Evaluation of a Knowledge-Based Child Sexual Abuse Program: Parents and Professionals Effect.

FACULTY SPONSOR(S): SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Stewards of Children, Darkness to Light program is the nationally available program proven to increase knowledge, improve attitude and change child-protective behaviors with regard to protecting children from sexual abuse. The purpose of this study is to determine if professionals and parents are knowledgeable after the Darkness to Light child sexual abuse prevention training. Participants in this study are the parents, responsible adults and youth serving organizations. Quantitative methods and secondary data analyses will be processed with SPSS. The findings of this study expect to identify the effectiveness of child sexual abuse prevention training.

P-134: ASHLEY REEVES

The Influence of Marital Status on Parenting Styles

FACULTY SPONSOR(S): SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP;

JAMES TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Parenting styles leave a lasting effect on a child's behavior. Many different parenting styles are used to discipline and raise children, such as authoritative, authoritarian, permissive, and uninvolved. This study will identify positive and negative parenting styles, and explore the relationship between marital status and parenting style. Specifically, the research will examine the results of the Adult-Adolescent Parenting Inventory (AAPI-2) collected from the Family Nurturing Center to find if a certain marital status is linked to specific parenting styles.

P-135: MARISSA ROSSINE

Replacing the Paddle: How Nurturing Parenting Affects Parental Beliefs on Corporal Punishment

FACULTY SPONSOR(S): SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP;

HOLLY RIFFE, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Over the centuries, beliefs regarding best practices for disciplining children and youth has changed. One practice that has persisted is the use of corporal punishment by parents to modify undesirable behavior. The purpose of this study is to investigate whether or not Nurturing Parenting classes have an impact on parental attitudes towards corporal punishment. Secondary data analysis examines parent responses from pre- and post-tests using the Adult and Adolescent Parenting Index. The results will be used to determine the effectiveness of the Nurturing Parenting curriculum in changing parental attitudes toward corporal punishment.

P-136: KAITLYN SHEERAN

Parenting Style and Gender

FACULTY SPONSOR(S): SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP;

KAREN TAPP, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Childhood development is deeply impacted by parental attitudes and behaviors. Given the developmental significance of parent-child interactions, social scientists have examined many facets of parenting, including gender differences in parenting style. The purpose of this quantitative study is to further explore the relationship between parenting style and gender. The current study will utilize secondary data gathered from the Family Nurturing Center's Nurturing Parent's program. The AAPI-II survey was administered to a sample of 500-1000 parents in the program. Appropriate statistical analyses will be conducted and the research findings will be reported to evaluate the relationship between parenting style and gender.

P-137: SAMANTHA SNIEGOWSKI

The Effectiveness of the Darkness to Light Program for Parents and Helping Professionals

FACULTY SPONSOR(S): SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP;

JAMES TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Child sexual abuse is an epidemic that continues to reveal disturbing numbers across the nation. As of 2007, there were 3,548 investigations of child sexual abuse in Kentucky. The Darkness to Light Program educates parents and helping professionals in awareness and preventative methods for child sexual abuse. This study seeks to examine the effectiveness of the Darkness to Light Program for parents

and helping professionals in understanding child sexual abuse. The study expects to find that the program is most effective for helping professionals in child sexual abuse awareness.

P-138: IANA SOUZA

The Benefits of Child Abuse Education

FACULTY SPONSOR(S): SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP;
KAREN TAPP, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: The purpose of this study is to examine the correlation of child abuse education and child abuse reports subsequent to the training. Many children are not aware of the potential dangers of child abuse. Children may experience different abuse situations, and need to be taught skills to recognize, resist, and report abuse. The Family Nurturing Center designed the Kids on the Block Program to provide school based prevention services, which increase awareness and provide school based prevention services, which increase awareness and provide children with the skills needed address abuse. Survey data will be collected from the schools that chose to participate in the Kids on the Block Program. This study expects to identify the relationship between child abuse educations and subsequent child abuse reports.

P-139: JESSICA SPROWL

Street rats to farm cats: Does school setting influence a child's perception of sexual abuse?

FACULTY SPONSOR(S): SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP;
HOLLY RIFFE, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Crime tends to be reported at a much higher rate in urban communities. Rural community members typically have more acquaintances, a greater isolation, and higher propensity to conceal personal problems. Additionally, mandated reporters (eg doctors or social workers) may not report the actual severity of the abuse because they know the perpetrator personally. Secondary data analysis of abuse-focused educational programs aims to understand the difference between programs conducted with urban or rural youth. Specifically, if programs located in rural areas are less efficacious than urban areas, the program will be modified based on geographic location.

P-140: ALISHA WALTON

The Effectiveness of A Child Sexual Abuse Prevention Program Among Caregivers

FACULTY SPONSOR(S): SUK-HEE KIM, COUNSELING, SOCIAL WORK AND LEADERSHIP;
JAMES TAYLOR, COUNSELING, SOCIAL WORK AND LEADERSHIP

Abstract: Child sexual abuse is an epidemic that has the potential to have devastating lifetime consequences for victims. Child caregivers work alongside children daily, putting them at an advantage to report child sexual abuse. With only a third of child victims disclosing, it is imperative that caregivers understand and implement child sexual abuse prevention methods in order to help victims of child sexual abuse and prevent further victimization. This study examines Darkness to Light's effectiveness of sexual abuse training to caregivers. This study expects to find an increase in child caregiver's knowledge on child sexual abuse prevention due to the training.

P-141: JOHN WELLS, KASSIANI KOTSIDOU

Exploring RFID-Integrated Classrooms

FACULTY SPONSOR(S): KASSIANI KOTSIDOU, ENGINEERING TECHNOLOGY

Abstract: The technology behind RFID, or Radio Frequency Identification, has existed for the past few decades. This technology has, until recently, been limited to a small number of applications, such as basic data collection on cattle. We have used this technology to create a classroom door opener that is more secure and convenient than the conventional door lock. All that is needed to access a classroom is the tap of a student card or bracelet. This will ensure that students are in the correct room at the correct time, while also automatically taking attendance for the instructor.

P-142: MOHAMMED ALANAZI

Development of a Concrete Deposition Head for Biomimicked Construction

FACULTY SPONSOR(S): SEYED ALLAMEH, ENGINEERING TECHNOLOGY

Abstract: Biomimicking helps develop structural materials that are tough against impacts. Combining elements from the fields of Biology, Materials, Robotics and Construction allows us to produce buildings that are resistant to earthquakes. A 3D construction printer was developed at NKU to write structures using plaster, clay and caulk. This work is focused on the development of a concrete deposition system to complement other deposition techniques. It allows 3D printing of concrete structures that can be tested for dynamic shear resistance properties.

P-143: JENNIFER WARDLOW

Characterization of Mechanical Properties of Microstructures

FACULTY SPONSOR(S): SEYED ALLAMEH, ENGINEERING TECHNOLOGY

Abstract: Microtechnology has matured to the point that hundreds of MEMS components are used in today's modern cars. These small microelectromechanical system devices allow detection and actuation regarding various tasks including acceleration of the cars and triggering of the airbags. The mechanical structures within MEMS are made of materials that may suffer from fatigue in various aggressive environments. A newly developed microtesting system is used to characterize tensile and fatigue properties of microsamples in various environments. Specimens are made of different materials including aluminum foam, covetic aluminum, weldment steel among others. This work investigates tensile properties of aluminum foam strut at high and low temperatures.

P-144: EMILY HELLEMS

The Forgotten Era of Black Jockeys

FACULTY SPONSOR(S): ANDREA WATKINS, HISTORY & GEOGRAPHY

Abstract: The Kentucky Derby is a long standing tradition for the Bluegrass state. While it is an event recognized nationwide, an aspect that is often overlooked are the African-American jockeys involved in the early years. The approximately twenty-five year period, known as the "forgotten era," was a time when black jockeys dominated horse racing. However, as black jockeys experienced more success, racist sentiments pushed many out of horse racing at the turn of the century, which led to the complete exclusion of black jockeys between 1921 and 2000. This poster presents the history and presence of African-American jockeys at Kentucky Derby.

P-145: ABIGAIL BRUEGGEMEYER

An American Paradox: The Hypocrisy of American Independence

FACULTY SPONSOR(S): MICHAEL WASHINGTON, HISTORY & GEOGRAPHY

Abstract: Thomas Jefferson and other Founding Fathers fought for independence under the belief that if Americans lost their political liberty they would be transformed into slaves of England. Because of this belief Jefferson likened the tyranny of Britain to the institution of slavery. Like the founding fathers, African Americans contributed to American Independence. They fought as soldiers in the Revolutionary War and possessed a fundamental value for the inalienable rights of life, liberty, and the pursuit of happiness, yet, the Founding Fathers elevated themselves over the blacks. The purpose of the poster presentation is to reveal this American paradox.

P-146: ERYNNE CARTER, ABDULMOHSIN KHOJA

The Undermining of the Fourteenth & Fifteenth Amendments

FACULTY SPONSOR(S): MICHAEL WASHINGTON, HISTORY & GEOGRAPHY

Abstract: This poster presentation exposes the misrepresentation that the 14th and 15th Amendments granted citizenship and the right to vote to the previously enslaved African Americans. The presentation displays how state governments enacted disfranchisement laws that took away the right to vote. An example is the Mississippi Plan organized in 1886 to disenfranchise blacks. It imposed a poll tax of two dollars and excluded voters convicted of a crime. It set the precedent for other states until 1898 when Louisiana contributed the Grandfather Clause. The result was that by 1910, Blacks had been disfranchised by constitutional provisions in several states.

P-147: KAMARIA MAYES, BRIANNA WEBSTER

African Women the Middle Passage and the Caribbean

FACULTY SPONSOR(S): MICHAEL WASHINGTON, HISTORY & GEOGRAPHY

Abstract: The kidnapping, forced migration, and transformation of Africans from human beings to property was experienced by African men, women, and children during the period of enslavement. African women, even during pregnancy, were confronted with the same conditions as their oppressed male counterparts. This poster presentation brings awareness to the conditions, treatment and resistance of African women during the Middle Passage and their seasoning experience in the Caribbean Islands.

P-148: TIYA PAYTON, JALENE HACKER, TREVOR MOFFETT, EMMANUEL COFFEE

The Creation of Race

FACULTY SPONSOR(S): MICHAEL WASHINGTON, HISTORY & GEOGRAPHY

Abstract: The creation of the terms "negro" and "white" have two very different origins. Because of the conquest of the Aztecs and Incas, Spanish colonization flourished throughout most of the 16th century. The term "negro," or the Spanish word for black, was assigned to the cargo of Africans who were captured and forced across the Atlantic Ocean into the gold and silver mines of Mexico and Peru. On the other hand, the term "white," as a racial classification of human beings, originated in the English Colonies during the late 17th century. This poster presentation illustrates the historical origins of these races.

P-149: BRITTNE SEIBERT, BETHANY ERP, ALLEN ASHIA, SARAH MELCHING

Pan-Africanism

FACULTY SPONSOR(S): MICHAEL WASHINGTON, HISTORY & GEOGRAPHY

Abstract: Pan-Africanism is an idea that is designed to encourage the solidarity of Africans all over the world. It was a movement designed to instill the belief that the unity of Africans is vital to progress of all types. It is a belief that all Africans share not only a common history, but a common destiny as well. Essentially, Pan-Africanism is designed to unite peoples of African descent and bring them back to their African heritage in order to promote unity among an oppressed race. This poster presentation examines this belief system widely known to be introduced and upheld by W.E.B. Du Bois.

P-150: BRIDGETTE GIVENS

The Naturalization Act of 1790

FACULTY SPONSOR(S): MICHAEL WASHINGTON, HISTORY & GEOGRAPHY

Abstract: Most Americans view the United States as the "Home of the Brave and Land of the Free." But according to the Naturalization Act of 1790, free white persons were the only group of immigrants to qualify for American citizenship. This, in part, explains the acts of Congress and Supreme Court decisions that prohibited the citizenship of non-whites until the passage of the 1952 Immigration Act. The purpose of this poster presentation is to reveal several important congressional acts and court decisions that limited the citizenship of non-white Americans.

P-151: BRADY HOLMER

Symmetry of Male and Female Journalistic Media Coverage in The New York Times during the 2008 Beijing Summer Olympics

FACULTY SPONSOR(S): ALAR LIPPING, KINESIOLOGY & HEALTH

Abstract: The purpose of this research study is to conduct a content analysis of journalistic coverage of female and male athletic events during the 2008 Beijing summer Olympic Games. This study will include a review of print and image (photo) coverage as presented in *The New York Times*. The 2008 summer Olympic Games was the first time that there were an equitable percentage of events based on gender: 51% male and 49% female. Based on the percentage distribution of events based on gender, this research will determine the degree of symmetry in mass media coverage between male and female events.

P-152: ASHLEY SANTOMO, KELSEY TAYLOR, JESSICA FOOTE, JESSICA MCCLELLAN

Comparison of landing biomechanics in female collegiate dancers

FACULTY SPONSOR(S): HAYLEY ERICKSEN, KINESIOLOGY & HEALTH;

RACHELE VOGELPOHL, KINESIOLOGY & HEALTH

Abstract: Traditional dance moves require the dancer to land in a variety of positions. These landing positions include parallel and turned out. Landing techniques may increase the risk for injury or put more stress on the lower extremity. Dancers from the NKU Dance Program and dance troupe will be asked to perform various dance landings, as well as a standard box jump off of a 12 inch box on to a force plate. Biomechanics will be analyzed by a 3D motion capture system. The purpose of this study is to determine if certain landing techniques make dancers more prone to injury.

P-153: ALESHA CHADWICK, PATRICK WEBER, KELSEY SIMPSON,

ALEX IVES, EMILY ENGLAND

Effects of Warmup Methods on Power and Agility

FACULTY SPONSOR(S): RACHELE VOGELPOHL, KINESIOLOGY & HEALTH

Abstract: Stretching is an integral part of any pre-performance warmup. Generally, dynamic stretching is thought to be more beneficial prior to power and agility exercises, while static stretching is more beneficial prior to flexibility-related activity. However, there are inconsistencies in the literature regarding whether significant quantitative results are observable from either type of stretching routine. There is also contradictory evidence suggesting that both stretching techniques have detrimental outcomes on acute performance. The purpose of this study is to examine the acute effects of dynamic and static stretching warmups, a bike-only warmup, or no warmup at all on power and agility performance.

P-154: ELIZABETH COX, JESSICA FULMER, LINDSEY SCHEIDLER, BRITTANY SIEGEL

Energy Drinks; How do they effect proprioception, balance, and reaction time in males?

FACULTY SPONSOR(S): RACHELE VOGELPOHL, KINESIOLOGY & HEALTH

Abstract: Energy drinks have become extremely popular in the last several years, especially within the athletic population where it has been reported that approximately 80% of young men have used energy drinks to enhance athletic performance. Energy drinks may improve one's energy level but may also have an effect on their balance, proprioception, and reaction time. An alteration to these motor skills may either enhance or diminish athletic performance. The purpose of this study is to investigate the effects energy drinks have on balance, proprioception, and reaction time in males.

P-155: RACHEL JENKINS, SAMANTHA JONES, ALLISON ROARK, AMANDA HEIN, GABRIELA SANTIAGO

The effects of cold-water immersion vs. warm-up on landing biomechanics and vertical jump height in physically active females.

FACULTY SPONSOR(S): RACHELE VOGELPOHL, KINESIOLOGY & HEALTH

Abstract: Athletes commonly complete a warm-up to prevent injury. The purpose of a warm up is to facilitate increased blood flow to the muscles that will be used during activity and increase heart rate. Often during athletic events, athletes who do not start the game are sitting in cool or even cold environments and enter the competition without participating in another warm-up. The purpose of this study is to examine the effects of no warm-up, warm-up, and cold water immersion on the kinetic and kinematics of the ankle, knee, and hip in a vertical jump landing in physically active college females.

P-156: TAYLOR STECKMAN, ALLIE CONNER, TAYLOR ZUBERER

Which fast pitch softball leadoff position, the rocker or sprinter position, results in the fastest time to second base in Division I softball players?

FACULTY SPONSOR(S): RACHELE VOGELPOHL, KINESIOLOGY & HEALTH

Abstract: In fast pitch softball, stealing is an integral part of the game where the runner advances a base without the ball being hit into play. Prior to stealing, a leadoff is taken to allow the runner to create momentum. The two primary leadoff positions are the sprinter start and the rocker start. Both of these positions allow the runner to gain momentum before the pitcher releases the ball, however no research has been conducted to determine which position is more effective. The purpose of this study is to determine which leadoff position results in the fastest time to second base.

P-157: STEPHANIE HAUBNER, TANNER HARNED, RYAN ENZWEILER,

JAKE CAIN, EMILY THOMES

The Influence of Load Carriage Configuration on Lower Extremity Landing Quality in Warfighters

FACULTY SPONSOR(S): ROGER KOLLOCK, KINESIOLOGY & HEALTH;

RACHELE VOGELPOHL, KINESIOLOGY & HEALTH

Abstract: Warfighters are often required to carry heavy loads during physical training and or tactical operations. Carriage of a heavy load and the positioning of that load (i.e. configuration) on the body may cause abnormal movement mechanics during tactical maneuvers (e.g. landing from a jump). This increases a Warfighter's risk for sustaining a lower extremity injury. Although load carriage is often necessary in today's modern war theater, there exist minimal research into the most appropriate load carriage configuration. Therefore, the purpose of this study will be to evaluate the influence of load carriage configuration on lower extremity landing quality in Warfighters.

P-158: LOGAN KREMER, CHRISTIAN COX, MATT ALLEN, JOSHUA HORNER

The Effects of Personal Protective Equipment on Balance and Movement Quality

FACULTY SPONSOR(S): ROGER KOLLOCK, KINESIOLOGY & HEALTH

Abstract: Personal protective equipment worn by Warfighters is essential for protection; however, it also increases the overall load on the Warfighter increasing the risk of musculoskeletal pain and injury through the alteration of balance and movement mobility and stability. Therefore, the purpose of the study is to evaluate the effects of personal protective equipment (i.e. tactical vest and combat helmet) on balance and movement mobility and stability in men and women. Each participant will perform three assessments: balance error scoring system, star excursion balance test and functional performance screen with and without the improved outer tactical vest and combat helmet.

P-159: BRADY HOLMER

The Effects of Energy Drinks on Heart Rate and Ratings of Perceived Exertion During Treadmill Exercise

FACULTY SPONSOR(S): WILL PEVELER, KINESIOLOGY & HEALTH;

GABRIEL SANDERS, KINESIOLOGY & HEALTH

Abstract: Energy drink manufacturers claim that their products can increase athletic performance. However, there are no studies to assess how these energy drinks effect treadmill exercise performance. Fifteen participants completed an initial VO2max test to set their 70% treadmill exercise. Participants underwent four separate conditions in which they rested for an hour then exercised for 15 minutes after they consumed a beverage (placebo (Squirt), Red Bull, Monster Energy, 5-hour ENERGY). Heart rate and ratings of perceived exertion were analyzed each minute during the treadmill exercise. Results will be presented at the 2015 Celebration of Student Research and Creativity.

P-160: JARED YOUNG

INKUBIZ - Move Ideas Forward

FACULTY SPONSOR(S): RODNEY D'SOUZA, MANAGEMENT; ZAC STROBL, MANAGEMENT

Abstract: INKUBIZ is a branding program that involves NKU students who

come highly recommended by their professors and connects them with local businesses looking to create a calculated marketing plan for their organization. The program offers top students an opportunity to interface with clients to create a strategic marketing/branding plan for their product/service to utilize towards implementation in the marketplace. These students are managed and mentored by Haile Professor of Practice in Marketing Gary De Jesus.

P-161: CLARE FIELD

Kona Ice: The Social Side of Responsibility and Involvement

FACULTY SPONSOR(S): DAVID RASKA, MARKETING, ECONOMICS & SPORTS BUSINESS

Abstract: In order to solve its problem of not appealing to Millennials, Kona Ice needed to understand Millennials' values and interests, particularly those regarding social responsibility and social involvement. My recommendations and rationale for Kona Ice were based on secondary research, exploratory research, and descriptive research. Based on my research, I recommended that Kona Ice: 1) create a target market of Millennial college students concerned with social involvement and responsibility; 2) create a value proposition and brand image that positioned it as a socially involved and responsible company; 3) create an internship brochure aligning with Millennial values, and; 5) create a social media campaign to create buzz among Millennials. The company has used the results in its recent redesign of its website and its section dedicated to internships.

P-162: ALI KASIROSARAF

Level of brand knowledge increases the chance of a Millennial student purchasing a brand of hydration beverage, indicated by student opinions.

FACULTY SPONSOR(S): DAVID RASKA, MARKETING, ECONOMICS & SPORTS BUSINESS

Abstract: Recent research suggests that Millennials are exposed to the brands they use through learning about brand characteristics. However, this hypothesis has not been tested for those not exposed. In the hydration beverage market, non-exposed students are associated with lack of knowledge about "isotonic" (Hoist). I present results from a study testing how these non-exposed Millennials consume hydration beverages with data from conducting observations and recruiting sample surveys. Students with exposed brand knowledge favored those brands highly over students who lacked brand knowledge. These results suggest that students should be taught what "isotonic" means, and that Hoist is locally owned (Cincinnati).

P-163: MADELINE LAYCOCK

The Millennial Marketplace

FACULTY SPONSOR(S): DAVID RASKA, MARKETING, ECONOMICS & SPORTS BUSINESS

Abstract: The Spring 2014 Rubicoin client based project offered students like myself to take part in an indispensable opportunity few other programs offer. This comprehensive deep dive into the real world of marketing prompted creative problem solving, data mining, and ultimately the production of contagious marketing deliverables for the Rubicoin team. Based solely on existing data from reputable worldwide sources, the following insight based strategies attempt to holistically address Rubicoin's marketing initiatives as they relate to Millennial populations.

P-164: RYAN LENIHAN

Kona Ice Internship

FACULTY SPONSOR(S): DAVID RASKA, MARKETING, ECONOMICS & SPORTS BUSINESS

Abstract: The Kona Ice Internship project focused on re-branding their internship program to make it more appealing to millennial college students. The challenge they faced was to eliminate the perception of Kona Ice brand as childish and make them believe that it can secure them with a great, successful future. Through secondary data research, experience surveys, direct observations, and online sample surveys of target customers, I identified how to position the brand, what and how the internship benefits should be communicated. As a result of this research, Kona Ice updated its website, including dedicated section to the internships.

P-165: LINDSEY NEWTON

Hydrate Your Everyday

FACULTY SPONSOR(S): DAVID RASKA, MARKETING, ECONOMICS & SPORTS BUSINESS

Abstract: Hoist, a Cincinnati-based startup company, needed to identify marketing strategies for selling 219,000 bottles of its product across 200 Kroger locations in 2015/2016 to make sure Kroger retains its product on its shelves. In order to assist the client, Mr. Heekin (President of Hoist) with the problem, I conducted qualitative and quantitative marketing research, including secondary data research, experience surveys, direct observations, and online sample surveys of target customers, to (a) identify ideal target customer, (b) determine how the product and brand

should be presented to that customer, and (c) how the customer should be made aware of it.

P-166: WITHDRAWN

P-167: SYDNEY SCHWALBACH

Rubicoin: Changing the World of Investing

FACULTY SPONSOR(S): DAVID RASKA, MARKETING, ECONOMICS & SPORTS BUSINESS

Abstract: Rubicoin is a startup company trying to establish how to become more connected and understood by the minds of U.S. Millennial College students. Their goal is to make investing more appealing to their target. To obtain the evidence for the marketing research objectives, I used various secondary data sources to gather the information. By understanding the culture, we have a greater chance to succeed with creating value and benefits for the consumers. By understanding the target's needs and wants, Rubicoin can be a successful, trustworthy company that is fun, easy, and contagious to use while educating the users.

P-168: COREY WALLER

Shave Off the Uncertainty, Lift Your World!

FACULTY SPONSOR(S): DAVID RASKA, MARKETING, ECONOMICS & SPORTS BUSINESS

Abstract: The present marketing project focuses on devising a strategic plan to assist Kona Ice to develop and increase awareness for its franchisee-based internship program to appeal to Millennial college students. Through conducting primary research, the author was able to craft distinct and effective recommendations which appeals to the Millennials aspirations, values, and character. The proposed recommendations of speaking in a harmonious, pop-cultured tone with unique/surprising content, while adhering to Millennials values, notably community involvement, and offering class credit, competitive pay & compensation, with hands on real-world experience, were implemented by the client towards attracting vibrant and desirable Millennial college students.

P-169: NATHAN DASENBROCK-GAMMON

Mathematical modeling to determine the effect of marine reserves on marine populations.

FACULTY SPONSOR(S): GAIL MACKIN, MATHEMATICS & STATISTICS;

CHARLES ACOSTA, BIOLOGICAL SCIENCES

Abstract: Overfishing has been detrimental to the populations of many marine creatures. One attempt to counter this is the institution of marine reserves, inside of which fishing is prohibited. Understanding how marine reserves work is of utmost importance to maximize their ecological, and economic, impact. A one dimensional reaction-diffusion model was considered to model the effects of marine reserves on the populations of marine life, as well as their effects on fishing stocks. Then, to determine the effectiveness of the model, simulations were run using parameters obtained from queen conchs in Glover's Reef, Belize, and compared to field data.

P-170: LINDSEY FREUDENBERG

Partial Least Squares Regression

FACULTY SPONSOR(S): JOE NOLAN, MATHEMATICS & STATISTICS;

MARK LANCASTER, MATHEMATICS & STATISTICS

Abstract: Partial least squares (PLS) regression is a type of statistical analysis now being applied more frequently in some quantitative research disciplines. The technique combines elements of regression and principal component analysis (PCA) and is used to predict one set of variables from another. It is particularly useful when the number of variables is large. More recently, the procedure has also been used as a path modeling technique to identify common structure among variables. This poster presents some of the ideas of PLS together with examples of potential implementation as well as cautions against misuse.

P-171: ELIZABETH STANLEY, LINDSEY FREUDENBERG, RAYMOND GRIMES, ZACHARY BEZOLD, KACIE KOTNIK

Statistically Speaking: Empowering Researchers Across Campus

FACULTY SPONSOR(S): JOSEPH NOLAN, MATHEMATICS & STATISTICS;

MARY LEE GLORE, MATHEMATICS & STATISTICS

Abstract: The Burkardt Consulting Center provides statistical support to NKU students and faculty as well as other clients from the Northern Kentucky region. Example projects have included data cleaning, database creation, grant evaluation, program assessment, survey development, and experimental design. These projects have involved statistical methods such as linear regression, logistic regression, analysis of variance, cross-tabulation, and simulation. This poster delivers a broad overview of our involvement in research projects across various disciplines.

P-172: RAYMOND GRIMES***Modeling Social-Interactions with Simulation***FACULTY SPONSOR(S): MARK LANCASTER, MATHEMATICS & STATISTICS;
JOSEPH NOLAN, MATHEMATICS & STATISTICS

Abstract: A benefit of statistical analysis is the ability to make predictions about a population based on sample data. Unfortunately sample data is sometimes not readily available. Methodologies to bypass this issue often involve simulation. Simulation models are generally as accurate as the assumptions involved in their creation. Once developed these models can be updated (a Bayesian concept) as future data becomes available. Simulation can be useful in many fields; this project investigates the use of simulation to develop an online social-interaction model.

P-173: ELIZABETH WILLIAMS, RACHAEL GASSER, KATELYN TESLA, JACOB DONNERMEYER***NKU String Project Story Project***

FACULTY SPONSOR(S): AMY GILLINGHAM, MUSIC

Abstract: Music is meaningful to youth. However, the regularly touted benefits of music instruction are often packaged in scientific data linking it to increased brain activity and academic performance. A true gem of musical study, what music means to someone, is rarely taken into account. The NKU String Project Story Project chronicled the meaningfulness of music in NKU String Project students (ages 8–14), wherein results indicated patterns such as improved self-esteem, a sense of belonging, and a long-term desire to study music. The findings were presented at the American String Teacher's Association National Conference in Salt Lake City, UT.

P-174: SYDNEY ALLEN, EMALINE ALLEN, BRITTANY BERRY, LISA NEWELL, JESS SCHUMMER***Note vs. Rote: Integrating Different Learning Styles and Teaching Methods in Music Classrooms***

FACULTY SPONSOR(S): KAREN KONER, MUSIC

Abstract: The purpose of this study was to examine the benefits of incorporating written and aural music theory into an ensemble and rehearsal setting and the best methods of implementation. We explored this through interviews with educators from different levels of K-12 music education about their experiences. We also did research through state and national publications. Through this study, we strived to find a practical and constructive way to better balance the written and performance aspects of music education.

P-175: BRITTANY CAMDEN***The Split: The Unbalanced Ratio Between Male and Female High School Band Directors***

FACULTY SPONSOR(S): KAREN KONER, MUSIC

Abstract: Throughout the music education community, it is common that male band directors are more prominent than female directors. I interviewed two band directors, one male and one female to discuss some potential reasons for this discrepancy. This research can hopefully enlighten not only me but other females striving to be high school or upper level band directors.

P-176: ERIC DANIELS, ERIK GOERLER, CALVIN HORNER***Aural Skills? How are students learning and prepared for the college curriculum?***

FACULTY SPONSOR(S): KAREN KONER, MUSIC

Abstract: The purpose of this research project is to examine how aural and rote skills are being used in the instrumental classrooms (9-12 grades). We will discuss methods that are currently being used, while examining the effectiveness of those particular methods. We will discuss the dedicated amount of in-class instructional time as well. Through observations and interviews with current high school instrumental teachers and university instructors, we will examine the level of incoming students in relation to their readiness of written music theory and aural skills.

P-177: ZACH NEAL, BRIANNE BRYER***The methods of integration for high-functioning learners into music classrooms.***

FACULTY SPONSOR(S): KAREN KONER, MUSIC

Abstract: High-functioning learners including, but not limited to those with ADD, ADHD, and high-functioning autism students are incorporated into music classrooms everyday. Although challenging, successful educators find ways to include special learners in a traditional learning experience. The purpose of this study was to observe rehearsals and interview music educators teaching in a Cincinnati School District to determine their methods of integration of high-functioning learners into music classrooms. Through this study we were able to see integration through all age levels, and across all music instruction styles of general music, orchestra, chorus, and band.

P-178: HOLLY PEEK, AARON HELMS***The developmental effects of instrumental performance***

FACULTY SPONSOR(S): KAREN KONER, MUSIC

Abstract: The purpose of this study is to identify the correlation between instrumental study, the age it begins, and mental and/or motor development, specifically examining the research questions: a.) When did you begin studying your primary instrument? b.) How many consecutive years did you spend studying your primary instrument c.) What was your ACT or SAT score? d.) What was your cumulative gpa in high school? e.) What extracurricular activities or hobbies have you been actively involved in throughout the last 7 years?

P-179: JOSHUA RAMOS, CAMERON EVERAGE***A Qualitative Examination of Using Popular Music vs. Traditional Music in a High School Band Setting***

FACULTY SPONSOR(S): KAREN KONER, MUSIC

Abstract: Using popular music in the classroom has become a trend amongst K-12 music classrooms. There are many differing opinions on whether this is good or bad for a program, whether more of one music is better than the other. The purpose of this study is to determine the best methods for literature selection in a high school band program, whether it be in a concert or marching band setting, specifically examining the extent of the use of popular music.

P-180: HANNAH SHIRKEY***Gender Differences in Music Education: How Far Have We Really Come?***

FACULTY SPONSOR(S): KAREN KONER, MUSIC

Abstract: The purpose of this research is to outline the gender stereotypes associated with the music education field and the impacts of these different stereotypes. In order to outline these differences, I interviewed several music educators of both genders in order to examine impacts that gender has had on their career. I am examining the implications of an educators gender on student learning and responsiveness to their instructors.

P-181: EDEN SMOCK***Benefits of Using Popular Music in the High School Classroom***

FACULTY SPONSOR(S): KAREN KONER, MUSIC

Abstract: George Ober and Joe Pergola (2015) suggest that using popular music in classrooms is an effective way to keep your students involved. Traditional music instruction leads students to analyze a piece identifying the compositional properties, which would not be the same in popular music. I present results from a study where popular music has a music theory model like traditional music. The purpose of this study is to examine the benefits of incorporating popular music into a K-12 music classroom.

P-182: KYLIE BATES, JUSTIN RUBERG***Casey's Law: A Guide for Families***

FACULTY SPONSOR(S): KIM DINSEY-READ, NURSING

Abstract: Casey's Law provides the loved ones of addicts an opportunity to achieve early recovery through court-mandated rehabilitation. The purpose of this change project was to educate the community about the disease of addiction, as well as the process involved in enacting Casey's Law. This was accomplished by creating a video featuring education and advice from relevant professionals. The video was placed on YouTube and distributed to the intended population using the social networking site Facebook. To date, the Casey's Law video has been viewed 734 times by members of the Northern Kentucky community and beyond.

P-183: TAYLOR MELTON***The Relationship Between Self-Efficacy and Nursing Success***

FACULTY SPONSOR(S): LOUISE NIEMER, NURSING; SANDRA GRINNELL, NURSING

Abstract: Using a quantitative research design, this project involved surveying freshman and senior nursing students regarding self-efficacy. The General Self-Efficacy Scale was used to assess the self-efficacy of each student participant. Results of the survey were correlated to selected grades. The p value obtained by linear regression indicated no significant evidence between self-efficacy and academic grades. This held true for both freshman and senior students.

P-184: ABBEY SCHERER, ZAC THOMAS***Teach Me to Teach You: Nurses as Educators***

FACULTY SPONSOR(S): SANDRA GRINNELL, NURSING

Abstract: Healthcare professionals provide patient teaching hoping to sustain positive patient outcomes. This project focused on the relationship between nurses, patients, and patient education. In healthcare, students are often not taught how to teach patients. The literature supports teach-back as the most effective teaching method.

A qualitative research design was used to determine how nurses teach patients and how patients receive the teaching. The research determined inexperienced nurses do not understand how to apply the teach-back method as well as experienced nurses. Research also revealed that interventions such as the learning needs assessment were overlooked in the healthcare setting.

P-185: THOMAS HAINES, MEREDITH BARONE

Enhancing the Structural Integrity of Ferrite Magnets for Magneto-Elastic Pressure Applications by Improving Various Sample Preparation Methods

FACULTY SPONSOR(S): CHARI RAMKUMAR, PHYSICS & GEOLOGY; WAYNE BRESSER, PHYSICS & GEOLOGY
Abstract: The goal of this research was to investigate ways to increase the structural integrity of ferrite compounds for magneto-elastic pressure applications. We successfully synthesized ferrite composite materials of $MnFe_3-xO_4$ using thermal decomposition of metal oxides. These ferrite materials have been observed to change their inductance due to external pressure, thus a potential pressure sensor. We have tested various preparation methods to increase structural integrity. The SEM results show that multiple grinding and double calcination of the sample powder reduces the porosity, thus allowing better compaction of crystals. We will compare our results to previously obtained results and discuss the improvements.

P-186: JAMES RUEHLMAN

Trends in Ordovician species through sea level changes observed in the Kope Formation of northern Kentucky

FACULTY SPONSOR(S): JANET BERTOG, PHYSICS & GEOLOGY
Abstract: In this research we looked closely at the limestone layers of the Kope Formation from the Ordovician Period. The layers of shale and limestone were measured in thickness. Then, if the layers of limestone were fossiliferous we extracted 30X30cm systematically from the top of the Kope. We then super imposed a 30X30cm grid over the limestone layers and made a census of fossil genera at each cross-section of the graph. In conclusion we found that Sowerbyella was inversely proportional to Oneilla and Batastoma was inversely proportional to Parvohallopora throughout the 5 sequences of sea level change.

P-187: TYLER SPAETH, DANIEL WALTERS, KAREN ELY, ANTHONY STEFFEN, JAYSON LOTZ

Norse Baja

FACULTY SPONSOR(S): MORTEZA SADAT, PHYSICS & GEOLOGY
Abstract: The Society of Automotive Engineers is a professional organization for students interested in the mechanical engineering and technology field. This project is to simulate real-world engineering and related challenges. Students involved are tasked to design, build, test, promote and race the vehicle according to the competition rules. The vehicle must withstand severe rough terrain during the competition. Norse Baja team members are responsible for generating financial support for their project. This project presents the 2015 car design and the results from previous years.

P-188: ALEXANDRA SHELTERS

Water Quality in the Banklick Creek and a Spillway Tributary in Independence, KY

FACULTY SPONSOR(S): SAMUEL BOATENG, PHYSICS & GEOLOGY
Abstract: This study seeks to monitor the water quality of the Banklick Creek and a spillway tributary off the Doe Run Reservoir in Independence, KY. The goal is to assess the overall health of the creek and evaluate any changes in key water quality parameters with the seasons. Four sites within the creek and the tributary are tested weekly for their pH, temperature, conductance, oxidation redox potential (ORP), and nitrate. Additional testing is done whenever there is a rainstorm. Changes in water quality between sites are evaluated. It is expected that land use (Dog Park) may affect the creek's water quality.

P-189: BRAD VOGELPOHL

Identification of Landslide Failure Planes through Varying Geophysical Methods

FACULTY SPONSOR(S): SARA JOHNSON, PHYSICS & GEOLOGY; THOMAS BRACKMAN, CENTER FOR INTEGRATIVE NATURAL SCIENCE AND MATHEMATICS
Abstract: The Greater Cincinnati area has some of the highest cost per capita in the United States for landslide damages. The goal is to generate varying models of slides, and then correlate the different surveying methods based on geophysical and drilling data in distinguishing failure planes. Methods for data acquisition are as follow: core samples, inclinometers, electrical resistivity survey lines, and ReMi (seismic) survey lines. Processed data will assist in detecting the slip surface and also aid in modeling slope stability. The non-invasive geophysical methods, unlike traditional drilling, will describe the slope in a more economical fashion. Results will be presented.

P-190: ANDREW BERGMAN, CLINT KAPPESSER, JOSH MORLEY

Use of Electrical Resistivity to Determine Locations of Unmarked Graves at Mammoth Cave

FACULTY SPONSOR(S): THOMAS BRACKMAN, CENTER FOR INTEGRATIVE NATURAL SCIENCE AND MATHEMATICS
Abstract: The purpose of this research is to determine the extent of an old cemetery and the locations of potential unmarked graves at Mammoth Cave National Park using the noninvasive method of electrical resistivity tomography. A complete geophysical survey will be conducted over an old cemetery in order to gather data and create a 3D model of the subsurface to help identify potential unknown graves. The resulting data and maps will be presented during the Celebration of Student Research.

P-191: BRYCE HAMILTON, ALEXANDRA BARKER, HANNAH UTTERBACK

Mineral Exploration Through Applied Geophysics

FACULTY SPONSOR(S): THOMAS BRACKMAN, CENTER FOR INTEGRATIVE NATURAL SCIENCE AND MATHEMATICS
Abstract: Rare earth elements (REE) are essential in the development of electronics, both militarily and for civilian consumption. The United States imports REE, with no domestic production currently taking place. It is anticipated that through geophysical investigation, American reserves can become established. Utilizing Electrical Resistivity, which applies an electrical current into the subsurface, we will attempt to collect data over abandoned sulfide mines in Gratz, Kentucky. This is because REE are known to be deposited proximal to sulfides. Any collected data will be provided to Advanced Geosciences for continued research to demonstrate the importance of this methodology in establishing mineral reserves.

P-192: MARIAH STANFORTH

The Background of Female Inmates and the Implications on Recidivism

FACULTY SPONSOR(S): DANIELLE McDONALD, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP
Abstract: The population of female inmates has more than tripled since 1980. Mandatory minimums and sentencing guidelines are sending women to prison at higher rates and for a longer period of time than ever before. In an attempt to understand the spike, it is important to consider not only the crimes that females are committing, but also the driving factors and the unique challenges they face. The present poster explores the relationship between female inmates' backgrounds and their adjustment to incarceration, as well as its relationship with factors effecting recidivism.

P-193: IAN ADDINGTON, DASHIK ADISA, MATTHEW AMPFER, KATRINA BALES, JAMIE BARTON, DANIEL BLEVINS, SUSAN BRIDGES, MATTHEW CAINES, AUNDREA CARROLL, BECKY EGAN, CATHERINE EVANGELOU, TIFFANY EVANS, COLLEEN FINNELL, BRADFORD FLETCHER, JENNIFER FRICKE, NATALIE GABBARD, DESTINI GERMANN, JAMES GILBERT, SJONTE GREGORY, ALAN HAAS, STACEY HALFHILL, KRISTINA HARRIS, CHRISTOPHER HATTER, CHRISTOPHER HUNTINGTON, JILL JAMES, RODNEY KARR, STEPHANIE KENT, ANGELA KRAMER, TINA MCWHORTER, ROBERT MOORE, MICHAEL MOSLEY, BARBARA NARWOLD, DEBRA OTT, SIBRINA ROWE, JESSICA SCHADLER, BRIAN STRAYHORN, GWENDOLYN SUTTON, JOANNA ULLRICH, VANNAK UN, TESSA WALZ, PATRICIA WAYMEYER, WENDELL WHEATON, JODI WILDEBOER, JOYCE WORRELL

Annotated Bibliography for Service Learning

FACULTY SPONSOR(S): FREDERICK BROCKMEIER, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP; KRISTEN LOVETT, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP
Abstract: An Annotated Bibliography was requested by the Scripps Howard Center for Civic Engagement (SHCCE) and will be shared with the Greater Cincinnati Service Learning Network, a regional network of service learning institutions: Northern Kentucky University, University of Cincinnati, Miami University, Thomas More College, Xavier University, and Cincinnati State University. The Annotations template provided the traditional information of an annotated bibliography but added (1) affiliation of the authors, (2) sample size, and (3) statement of the usefulness of the resource as determined by student teams and was created in a wiki to allow for supplementation and editing.

P-194: FATIMATA BA

With just one Mango, We all can make a difference

FACULTY SPONSOR(S): KIMBERLY WEIR, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP
Abstract: Mangos are an important part of many Latin American, Southeast Asian and African countries' economies. Many people do not think about where this fruit comes from or how many people's lives they affect by buying it. Buying fair trade mangos can help these developing countries, because the sales could help to increase incomes and food

security of small farmers in these countries. Mangos are a rich fruit, and are good for the body, and buying the fruit helps insure one that they are doing good for themselves, while helping others.

P-195: BENJAMIN BIRKENHAUER
The Human Costs of Precious Metals

FACULTY SPONSOR(S): KIMBERLY WEIR, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: We love our cellphones, but do we ever ponder what's inside that remarkable pocket sized device? It may surprise you that the costliest of substances comprise parts of it—gold, platinum, silver. Sadly, the processes by which these precious metals are extracted can have severe environmental and human impacts; of which, among the most likely to suffer are global south populations. Fortunately, there are means to curb these effects, the most effective being Fair Trade. And, perhaps contrary to popular belief, these measures are mutually beneficial to all actors—both the laborer, and the corporation trying to turn a profit.

P-196: NICHOLAS CANCHOLA
New Horizons - The Expansion of Fair Trade Approved Pineapples

FACULTY SPONSOR(S): KIMBERLY WEIR, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: Before the introduction of fair trade regulations, pineapple farmers suffered from small wages and high cost of living. However, through Fair Trade, pineapple farmers in places like Costa Rica, Uganda, and Belize are strengthened to combat poverty, further development in the surrounding area, and improve education. This had been achieved through fair trade by increasing the minimum fair trade price of pineapples grown on these farms. Fair trade approval for pineapples has also expanded everywhere from the Caribbean to South East Asia.

P-197: FITZGERALD CHIBAMU
Going Fair in Bananas

FACULTY SPONSOR(S): KIMBERLY WEIR, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: Bananas are mainly grown in hot humid regions like Mexico, Guatemala, Honduras, and Colombia which are normally within twenty degrees either side of the equator. Large corporations like Chiquita have oppressed the rights of farmers and laborers, thus effectively suppressing the price of bananas. Bananas are generally believed to be a cheap fruit and this further affects the price farmers get. In the banana industry, production, profits, and power are highly concentrated, so the need for fair trade of the world's most popular fruit is imperative for providing fair wages, improving work conditions, and developing communities.

P-198: CHRISTOPHER DRAKE
The Pressing Issue of Fair Trade Wine

FACULTY SPONSOR(S): KIMBERLY WEIR, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: A glass of wine with dinner is a common staple, but have you ever considered how it got to the table? It's far more likely the wine is conventionally produced rather than fairly traded. Fair trade wine generally comes from countries in South America and serves to help producers make a reasonable wage for the grapes they produce to make this wine. Fair trade wine doesn't only offer economic benefits; it offers environmental benefits by not using harmful chemicals that affect the quality of the grapes or health of the producers, and promotes community development as well. ¡Salud!

P-199: ALEX FULTZ
Drink Tea Responsibly

FACULTY SPONSOR(S): KIMBERLY WEIR, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: Tea reached an all-time market high in 2010. In relation to the cost of living, however, prices are at near record lows for producers, which makes the fair trade movement vitally important to the tea industry. Since the peak of the British Empire, tea plantation workers in India, Sri Lanka, and parts of East Africa have relied on their employers to provide basic necessities, such as healthcare, that have been cut in order to maximize profits. Fair trade offers a better quality of life by giving producers a fair share of the profit.

P-200: LAUREN GABBARD
Wearing Fair

FACULTY SPONSOR(S): KIMBERLY WEIR, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: This poster presentation, titled "Wearing Fair," will educate viewers about the basic principles of fair trade through the clothing industry. Despite the history of the clothing industry and consumer demand, fair trade allows ethically concerned people to make purchases

that have been produced free of exploitation of humans and ecosystems. There is a growing number of options for customers to choose from when buying fair trade clothing. Though there are some key differences in the certification standards of fair trade organizations, buying fair trade can guarantee more money goes to the people producing our clothing, more investments in local communities are made, and the environment is protected from exploitation.

P-201: MARY GREENE
Go Nuts for Fair Trade

FACULTY SPONSOR(S): KIMBERLY WEIR, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: Fair trade farmers in Africa, India, and South America use sustainable farming methods in order to produce the very best almonds, cashews, peanuts, walnuts, and Brazil nuts. These farms are very small-scale. Therefore, nut farmers join together in the International Nut Producer's Co-operative in order to produce large quantities of premium quality nuts for their buyers. Liberation Foods is the only fair trade nut company in the world, and the company is 44% owned by the small farmers of the INPC. This ensures that the money made from fair trade nuts is brought back into the communities of the farmers.

P-202: ALLYSSA KUHLE
Rice is Nice, Shouldn't You Care if it's Fair?

FACULTY SPONSOR(S): KIMBERLY WEIR, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: With rice being the most widely consumed food around the world, the demand for large quantities of it is very high. High demand, however, affects the producers in developing countries, due to the exploitive nature in which it is often obtained. It is important to understand the roles of both consumers and producers and that with fair trade, the distance between the two is shortened while ensuring the fair amount of payment for goods, quality of the goods, and economic development at both ends of the spectrum.

P-203: AUSTIN RITTINGER
A Goal for Global Economics

FACULTY SPONSOR(S): KIMBERLY WEIR, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: The soccer industry is a multi-million dollar business that is found in every country. The top-paid players make millions of dollars. However, the people who make the balls have no such economic opportunity. The money that buys the balls is not seen by them. Now there is hope. Businesses are trying to make the most popular sport more opportunistic for everyone involved by donating the profits to the workers that is above the salary they would find at a major retailer. This is all possible due to fair trade: making sure the producer is properly paid for their work.

P-204: DAVID SCHUMACHER
The Truth Behind Fairtrade Cocoa

FACULTY SPONSOR(S): KIMBERLY WEIR, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: As profitable as cocoa is worldwide, farmers gain very little. With volatility in cocoa prices, it is impossible for farmers know how much they will be paid, hindering their future efforts. The average age of cocoa farmers is 50, with many young people seeing no return on their year-round, labor intensive efforts. Fair trade helps ensure that the farmers receive a fair price, making possible an investment in their livelihood. With around six million people worldwide, mostly from the Ivory Coast and Ghana, depending on the sourcing of cocoa for their sole source of income, Fairtrade's impact cannot be underestimated.

P-205: HANNAH SYKES
A Rose Between Thorns: Diving Further Into the World of Handicraft Jewelry.

FACULTY SPONSOR(S): KIMBERLY WEIR, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: In a world of Tiffany's, Cartier, and Bvlgari, it is mesmerizing how enticing they can make precious stones look. Those big name jewelers are not the only ones who can make fabulous looking jewelry though. Cue the women all over the world who work to create beauty out of poverty and strife. Jewelry is a form of expression and a way to spice up an outfit. It is also, in the fair trade sense, a form of rebellion for those struggling against oppression and even sex slavery. Fair trade can offer the rewarding development of communities on the road to new life.

P-206: MARIA CAMILA VARELA
Fair Trade Fabric Products: When the Means and the Ends Are Both Justified

FACULTY SPONSOR(S): KIMBERLY WEIR, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: Most people don't know where, how, and/or by whom their fabric products are made. Even more surprising is the fact that purchasing a product has consequences for someone else around the world. Fair trade fabric products, like quilts and tapestries, have improved the lives of people living in developing countries by providing a living wage, having a direct relationship between the consumer and producer, and enhancing the local community. Greater understanding and distribution of these products would provide greater justice in the world and contribute to the fight against exploitation and poverty in regions like Sub-Saharan Africa and India.

P-207: ROSLYN WILL

Should we follow the trends?

FACULTY SPONSOR(S): KIMBERLY WEIR, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: Enhancing butters and oils, like cocoa butter and argan oil, are the latest fads in the cosmetic and food industries. These popular commodities are being harvested for many uses often considered miracles for the human body. However, for many who purchase and use these products for the health benefits there is not much thought into where or how they were produced. Many of these butters and oils come from global south countries, so opting for fair trade versions of them could help improve the livelihoods of producers in a number of ways, including better living conditions and medical care.

P-208: JORDAN BISHOP, TAELOE MCMILLIN, LILY WANG

How Leadership Techniques Impact Susceptibility to Complete Tasks

FACULTY SPONSOR(S): MEGAN DOWNING, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: What makes someone take directions? To test the effectiveness of leadership techniques related to giving direction, we asked people to complete at least three tasks, each using a specific directional technique. We began with simple tasks, and then increased the complexity/oddness of the task, testing the effectiveness of each instructional technique. This was explored to identify the most effective ways to provide direction when leading people in tasks and activities.

P-209: ALEXANDRA BLACKABY, BAILEY BODEN, WILLIAM REDDEN

A Review of Military Leadership as it is Portrayed in Movies

FACULTY SPONSOR(S): MEGAN DOWNING, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: We examined how military leadership is portrayed in popular movies. We focused on bravery and the leadership qualities portrayed in characters who represent individuals willing to lay down their life for others. We also explored leadership styles as they are portrayed in military movies.

P-210: SHANNON CAREY, KAYLEE COLLINS, XANTHIA JENSEN

Leadership in High School, Success for the Future

FACULTY SPONSOR(S): MEGAN DOWNING, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: Does having a leadership role in high school help to prepare high school students for the real world? We examined current leadership research to identify leadership skills identified for success. We then interviewed high school leaders and high school faculty/staff sponsors to determine their perceptions of how effective high school leadership roles are in impacting leadership development among high school students for the identified leadership skills.

P-211: ALEXIS GARRISON, MACK RAMSEY, KENDALL SANDY

Examining the Impact of Social Media on High School Students' Perceptions of Leadership

FACULTY SPONSOR(S): MEGAN DOWNING, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: For this study, we interviewed high school students to examine the impact of social media on high school students' general opinion of leadership and leaders in pop culture, sports, politics, local community, and in their high school. We set out to determine if social media activity by or about these leaders influenced students' perceptions of the leaders and how their opinions and perceptions were influenced.

P-212: ISABELLA HALL, HAILEY BISHOP, HUNTER WOOD

Examining High School Leaders and GPAs

FACULTY SPONSOR(S): MEGAN DOWNING, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: In today's hiring market, it's been in the news that some employers don't always examine GPAs closely. We conducted research to better understand this phenomenon and to identify why employers do look at GPAs (when they do). We also interviewed a variety of high school leaders at a Northern Kentucky high school to determine if those in high

school leadership roles tend to hold high GPAs as well as if these high school leaders worry about GPA and why.

P-213: MELANIE MULLINS, HARLEY GROGAN, JOHN REYNOLDS

Examining Anxiety and its Impact on High School Senior Leaders and Followers

FACULTY SPONSOR(S): MEGAN DOWNING, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: We will invite seniors at a Northern Kentucky high school to participate in our study to examine leadership roles and anxiety and follower roles and anxiety. First, we will share general information with participants on the definition of a leader and a follower and ask them to classify themselves as a leader or follower. We will then invite students to complete an anxiety assessment survey to measure their anxiety tendencies in order to examine whether or not there is any correlation between anxiety tendencies and high school students in leader or follower (participant) roles.

P-214: KAYLIN WELLS, CHANDLER AULICK, KENTON WELLS

Kanye West, Why He's "Best"

FACULTY SPONSOR(S): MEGAN DOWNING, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: In the 21st Century, numerous hip hop artists are emerging and growing in popularity. Kanye West specializes in rap and refers to himself as "Yeezus" (in reference to Jesus Christ). Despite what many view as arrogant behavior, Kanye remains a "leader" to many in our society. Through document analysis of social and traditional media as well as interviews, music videos, and lyrics, we examine Kanye's habits and attitude to analyze his influence as a "leader".

P-215: IAN WEST, MEGAN CAUDILL, MICKALLA THOMAS

Campaigns and Territory Takeovers, Politicians and Mobsters: Organized Crime and Government

FACULTY SPONSOR(S): MEGAN DOWNING, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: From the gangsters of the 1920s to today's Yakuza, organized crime has always had a hand in government. This corruption is due in part to poor leadership, both from those corrupted and those trying to stop such corruption. Does organized crime still have a heavy hand in government? If so, where, and more importantly, why? We analyze global criminological data and the history of leadership against organized crime to explore these questions.

P-216: JENNIFER KORTH, MIKAYLA ROARK

Women in Latin America

FACULTY SPONSOR(S): RYAN SALZMAN, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

Abstract: Throughout history, women in Latin America have been socially subjugated. This project explores the role of women in Latin America by looking at two disparate contexts. One will examine the evolution of women's rights in Colombia since the 20th century. Additionally, this context will discuss how Colombian women are often the victims of violence and mistreatment. The other context considers the role of women in revolutionary movements throughout the region. During these revolutions, women participated in various roles in hopes of bringing about reform. Taken together, these two approaches will help us understand the roles of women in Latin America.

P-217: BRITTANY EDMONDSON, ANDREA LAWRENCE, HILLARY GAFFIN

How Can It Be Stealing When I Paid for the Food: The Rationale Behind Soda-Filching

FACULTY SPONSOR(S): ANGELA LIPSITZ, PSYCHOLOGICAL SCIENCE

Abstract: We explored soda-filching, filling a courtesy water cup with non-water. We surveyed 364 Introduction to Psychology students in six classes. On a 19-item questionnaire, participants indicated if they had considered filching, had filched (why, with whom and where), if they felt guilty, or thought it was stealing. Over 80% had considered filching; 64.8% had done so. Reasons most cited were "drinks cost too much" and "large company can handle it." Filchers were less likely to see filching as stealing or hurting a business and estimated the number of other filchers as higher. The most frequent filchers had the least guilt.

P-218: HEATHER HERTZENBERG, COREY LEACH

Effects of Alcohol and Energy Drinks on Simulated Driving and Field Sobriety

FACULTY SPONSOR(S): CECILE MARCZINSKI, PSYCHOLOGICAL SCIENCE

Abstract: Laboratory research has shown that alcohol mixed with energy drink (AmED) consumption can lead to decreased feelings of intoxication and a desire to drink more alcohol (Marczinski et al., 2011, 2012, 2013). The consumption of AmED is also linked to impaired driving incidents, making it imperative to examine these effects. This study examined participants on simulated driving, balance, and police standardized field sobriety tests. Social drinkers received four different doses (placebo,

energy drink, alcohol and AmED) separated by a minimum of 24 hours. Results indicated that participants' balance was more impaired when drinking alcohol alone than the AmED dose.

P-219: SARAH MALONEY

Effects of Alcohol and Energy Drinks on Speed of Beverage Consumption

FACULTY SPONSOR(S): CECILE MARCZINSKI, PSYCHOLOGICAL SCIENCE

Abstract: The purpose of this study is to examine the effects of alcohol mixed with an energy drink (AmED) versus alcohol alone on the speed of beverage consumption, simulated driving, and reaction time performance. Fourteen social drinking NKU students completed one practice session and four dose sessions (separated by a minimum of 24 hours) where consumption time was unobtrusively obtained. After dose consumption, breath alcohol concentration was measured and participants completed tasks and subjective measures. The results indicated that participants felt less sedated and had faster consumption rates under the AmED dose compared to the alcohol alone dose.

P-220: NICOLE STEPHENSON, DOUGLAS KRULL

Got Faith? Comparing the Religiosity of Five Groups

FACULTY SPONSOR(S): DOUGLAS KRULL, PSYCHOLOGICAL SCIENCE

Abstract: This project compared the religiosity of psychology students, MTurk participants, psychology faculty from institutions in the Council for Christian Colleges and Universities (CCCCU), recruits from the APA Division 36 (Society for the Psychology of Religion and Spirituality) listserv, and recruits from the Teaching In the Psychological Sciences (TIPS) listserv. As expected, TIPS participants were the least religious and CCCCU participants were the most religious. Division 36 participants displayed religiosity higher than the college student participants. Researchers' religiosity might influence the research process and instructors' religiosity might influence interactions with students.

P-221: JOZIE BANAS, LISA RUSCHMAN

Identifying Barriers to Recovery from Drug Addiction

FACULTY SPONSOR(S): PERILOU GODDARD, PSYCHOLOGICAL SCIENCE

Abstract: This project sought to identify barriers to the process of abstinence-oriented recovery from drug addiction. Focus groups identified common themes that were then used to construct the 30-item Barriers to Recovery survey. Respondents included 149 men and 163 women currently in recovery, primarily from heroin and other opioids. The ten most difficult barriers included concerns about (a) environments associated with past drug use; (b) others' expectations about the recovery process; and (c) practical problems, such as housing and money. Results may be used to help treatment providers improve their programs and identify opportunities for new initiatives.

P-222: SARA SHARPE

Overdose Prevention Is Fine But I'm Not So Sure About Needle Exchange: Factors Related to Support for Specific Heroin-Related Harm Reduction Programs

FACULTY SPONSOR(S): PERILOU GODDARD, PSYCHOLOGICAL SCIENCE

Abstract: Northern Kentucky is experiencing a heroin epidemic, and activists are advocating for harm reduction programs including overdose prevention, needle exchange, and medication-assisted treatment. Opposition remains widespread, but some programs (e.g., overdose prevention) are more acceptable than others (e.g., needle exchange). This study identified specific predictors of opposition to each of these three programs. While some predictors (e.g., closed-mindedness) were associated with disapproval of all three programs, other predictors (e.g., judgments of fairness) were relevant only to specific programs. Our findings suggest that advocates may need to tailor their messages to factors relevant to specific harm reduction strategies.

P-223: RACHEL GRUBER, SYLWIA GUTOWSKA, RYAN ALLIO

Development and Validation of a Transformational and Transactional Leader Motivation Scale

FACULTY SPONSOR(S): PHILIP MOBERG, PSYCHOLOGICAL SCIENCE

Abstract: Motivation is an integral part of leadership theory and practice that requires leaders to develop individual styles for motivating subordinates (Kanfer, 2012). The present study describes the development, secondary validation, and reliability analysis of a multidimensional scale intended to distinguish the approaches adopted by transactional vs. transformational leaders along five motivation dimensions, strategy choice and the arousal, direction, intensity, and persistence of effort.

P-224: RACHEL GRUBER, CAITLIN KASSEDYNE, BRANDON STYLES

Development and Validation of a New Scale on Ingratiation

FACULTY SPONSOR(S): PHILIP MOBERG, PSYCHOLOGICAL SCIENCE

Abstract: Counterproductive work behavior, especially when interpersonal, has prompted increasing concern for organizations.

One form of interpersonal workplace aggression, ingratiation, involves malicious intent to manipulate others for instrumental gain, but has attracted surprisingly little research attention. Although deceitful and masked, this insidious interpersonal behavior often is socially accepted as efforts to gain power or evoke influence. The present study describes the development, initial validation, and reliability of a scale intended to assess ingratiation, and demonstrates relations with related organizational constructs.

P-225: LORI NETHERO, TIFFANY RIDENER, ELIZABETH MORALES, BRAD NIEHOFF

Psychological Safety in the Workplace:

The Development and Validation of a Multi-Dimensional Scale

FACULTY SPONSOR(S): PHILIP MOBERG, PSYCHOLOGICAL SCIENCE

Abstract: Psychological safety is a relatively new construct that focuses on individuals' perceptions of interpersonal risk-taking among coworkers, supervisors, and teams within the workplace. The present study clarifies the construct of psychological safety and describes the preliminary validation of a newly developed 46 item multi-dimensional scale. With a sample of approximately 357 Northern Kentucky University students, preliminary analysis using obliquely-rotated exploratory factor analysis extracted four factors of psychological safety namely supervisory support, apprehension, peer support and risk-taking. Evidence of internal structure, external validity, and reliability for the proposed multi-dimensional scale is reported.

P-226: JESSICA PENCE, KAYLE ERICKSON, CLAIRE STEPHENSON, NICHOLAS ULLRICH

The Development and Preliminary Validation of a Supervisory Burnout Scale

FACULTY SPONSOR(S): PHILIP MOBERG, PSYCHOLOGICAL SCIENCE

Abstract: The present study describes the development and preliminary validation of a scale designed to assess supervisory burnout. Three hundred and sixty-nine undergraduate students from an urban Midwestern University participated; all were instructed to recall a situation in which they were responsible for overseeing the tasks of others. Using exploratory factor analysis, we found two factors: exhaustion (36 items, $\alpha = 0.95$) and cynicism (19 items, $\alpha = 0.87$). Further, evidence of criterion-related validity linking exhaustion and cynicism to related constructs is reported. This scale offers potential utility to diverse organizations in which supervisory burnout threatens organizational effectiveness and individual health.

P-227: JESSICA PETOR

Psychological Work Detachment:

Construct Definition, Scale development, and Preliminary Validity Evidence

FACULTY SPONSOR(S): PHILIP MOBERG, PSYCHOLOGICAL SCIENCE

Abstract: Emerging research in psychological work detachment has identified the potentially harmful effects of insufficient detachment on individual productivity and worker health (Fritz & Sonnentag, 2005). This study conceptualizes the domain of detachment and reports preliminary validity, reliability, and factor analytic evidence to support the hypothesis of psychological work detachment as a multidimensional construct. This study provides insights into the internal structure of inability to detach; relations to workplace attitudes, needs, and values; emotional and coping responses linked to work detachment, and potential interventions to guide future research and enhance worker health.

P-228: HEATHER PUHL, HOPE DISCHAR, REZEDA DOZIER

The Development and Preliminary Validation of a Measure of Organizational Followership

FACULTY SPONSOR(S): PHILIP MOBERG, PSYCHOLOGICAL SCIENCE

Abstract: Little research exists on organizational followership, defined as a readiness to acknowledge a leader's role and contribute by accepting direction and pursuing the leader's objectives. We developed a scale designed to assess hypothesized dimensions of followership, gathered data from 235 respondents, conducted exploratory factor analyses to assess internal structure, and examined external validity. A unidimensional factor emerged which correlated strongly in predicted directions with related organizational constructs. Because followership may impact leader and organizational effectiveness, this instrument is intended to facilitate research into this emerging domain.

P-229: CHRISTINE MCPHILLIPS

An Assessment of Student Learning in an Advanced Psychology Laboratory Course

FACULTY SPONSOR(S): ROBIN BARTLETT, PSYCHOLOGICAL SCIENCE

Abstract: This pilot study assessed learning outcomes related to an advanced laboratory course in developmental science. Using a pre-post test design, participants completed an objective test of research-related knowledge that emphasized methods used in the field of developmental science. Students enrolled in PSY 321L: Developmental Science Laboratory (n 12) were compared to students enrolled in the prerequisite PSY 210: Research Methods and Tools course (n 12). Analyses

will examine the effects of: (a) time of measurement (pre- vs. post-test), (b) type of course (PSY 210 vs. PSY 321L), and (c) the interaction between time of measurement and type of course.

P-230: DAVID CHAPIN

"Those Little ...Angels": An Ethnography of a Children's Long-term Therapeutic Facility

FACULTY SPONSOR(S): DOUGLAS HUME, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: This poster illustrates the cultural model of coping mechanisms used by the staff of a long-term therapeutic facility for children. This project is the result of the fall 2014 anthropological ethnographic methods course, which used ethnosemantic methods, such as interviews and card sorting as well as taxonomic and attribute analyses to discover a central theme for staff of this microculture. The title of this poster, "Those Little ...Angels", represents a central theme within this microculture; the discord in the relationship between the staff and children as both being caring and sarcastic.

P-231: TYLER SCRANTON

At The Mercy of the Tones: An Ethnography of Firefighters

FACULTY SPONSOR(S): DOUGLAS HUME, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: This project represents findings of an ethnographic research project on firefighting culture, focusing on the domain of "mechanisms of injury". The title represents a central theme of the culture; the constant pressure to respond to an emergency call, represented by a series of tones over the radio system. This was the final project of the fall 2014 ANT 340 Ethnographic Methods course, utilizing ethnosemantic methods (interviews, card sorting, taxonomic and attribute analyses) to reveal cultural structure. The cultural domain "mechanisms of injury" is central to how firefighters plan and organize their emergency response calls.

P-232: LIZA VANCE

Systematically Unsystematic: Randomization of Policing within the Community

FACULTY SPONSOR(S): DOUGLAS HUME, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: This poster illustrates the results of an ethnographic research project investigating one police department's method of being systematically unsystematic, so that their movements are unpredictable. This research was the final project of a spring 2015 independent study in anthropology on ethnographic research methods. Data were gathered using ethnosemantic methods, such as interviews and card sorting as well as taxonomic and attribute analyses, which were learned during the course. For police to be systematically unsystematic they must perform their duties in a deliberately random manner thereby manipulating the effects of being observed by the public in different locations at different times.

P-233: GINA YOON, NICHOLAS THAXTON, GABRIELLA LOCKE, STEPHANIE FELTNER, COLIN BINDAS

Cultural Models of Sugar Cane Farming Folk Knowledge: Findings from the Ethnographic Field School in Belize, June 2014

FACULTY SPONSOR(S): DOUGLAS HUME, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: This poster presents the cultural models of sugar cane farming folk knowledge collected during the Ethnographic Field School in Belize, June 2014. As part of the Center for Applied Anthropology and in collaboration with the Belize Sugar Industry Research and Development Institute, the goal of this research was to document cultural models of sugar cane farming and household budgeting within sugar cane farming communities in Northern Belize. The cultural models to be presented include: educational budgeting, impacts of outside farmers, large and small farms, and sugarcane froghoppers as well as general models of sugar cane farming and household budgeting.

P-234: LAUREN JAMES

Bass Wars

FACULTY SPONSOR(S): J. ROBERT LILLY, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: This project focuses on the social and economic changes that occurred in a region of East Tennessee, before, during and after a government-sponsored introduction of striped bass meant to provide the region with a stronger fishing economy. Our research examines the symbolic nature of the bass introduction and the decades-long conflict that followed, between pro and anti-striper groups. We further examine the conflict between traditional ideology and modern technologies and the influence of government regulation, resulting in anti-government sentiment and social turmoil, within the local culture.

P-235: GRACE HAVRAN, IAN TAKAOKA, ARTURO MINERA

It Can't Be Helped: Japanese-Canadian Internment During World War II

FACULTY SPONSOR(S): JUDY VOELKER, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: During World War II, thousands of ethnic Japanese were relocated from the West Coast of North America to detention centers. Property was auctioned off, and individuals born and who identified as Canadian or American were considered enemy aliens. While the

American government unilaterally supported internment primarily due to national security hysteria, Canadian internment policy emerged from simmering anti-immigrant sentiments in British Columbia. Because of wartime treatment, pressure to settle east (or renounce citizenship and leave Canada), and anti-Japanese legislation that continued even after the war, Japanese-Canadians returning home to the West Coast numbered far fewer than those in the United States.

P-236: JACK LOWE

Archaeological Evidence for Engineering Techniques and Construction of Irrigation Canals Related to the Chavin Culture of the Central Andes

FACULTY SPONSOR(S): JUDY VOELKER, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: When examining artifacts in the cultural context of an ancient society, one develops explanations and indicators that may suggest social development. Some of the most extensive and advanced systems of irrigation canals have been developed and discovered in ancient America, specifically coastal Peru. Excavations relating to the Chavin people of the Andean region suggest the development and understanding of hydraulic principles and the engineering of well-planned canal systems. This poster examines related archaeological studies that suggest social cooperation and evolution of a group, which catalyzed a more productive and interrelated way of life. These factors are important in learning how societies expand and become more complex.

P-237: HELENA SIZEMORE

The Heartbeat of the World: An Exploration of Ritualistic Drums

FACULTY SPONSOR(S): JUDY VOELKER, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: This project focuses on understanding the many uses of drums across cultures and in global context. Drums are often used in ritualistic settings to provide feelings of mysticism and magic. Designs portraying nature or aspects of the spirit world often decorate drums turning them into three dimensional forms of art. The tempo of a drumbeat sets the tone for traditional ceremonies or can be used to transport participants into the spirit world. Outside of ritualistic purposes, drums may be used as a means of communication and the different beats often portray news of war or celebration, among other messages.

P-238: HELENA SIZEMORE

Celtic Cosmology: An Exploration of Ancient Celtic Belief Systems

FACULTY SPONSOR(S): MICHAEL SIMONTON, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: The purpose of this project is to create an understanding of the ancient Celts through the study of history and mythology. Although the ancient Celts could read and write, they were different from other societies in the belief that oral tradition was more important than documentation through writing. Stories passed down through generations include tales of heroic deeds as well as mythological figures. Were they just stories or are they dramatic tellings of real events? Where does the spirit world end and the real world begin? How can we relate ancient Celtic mythology to other systems of belief?

P-239: JESSICA BOLTE

Effects of visitor group size on activity levels in sifakas (*Propithecus coquereli*) in zoo environments

FACULTY SPONSOR(S): MONICA WAKEFIELD, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: Captivity and increased contact with humans can stress wild animals in zoos. When zoo animals are stressed by increased number of visitors, activity levels and hiding behaviors frequently increase. The behavior of sifakas (*Propithecus coquereli*) in response to visitors was observed at The Cincinnati Zoo. Linear regression determined that active behaviors tended to increase with number of visitors ($p = 0.096$), inactive behaviors significantly decreased ($p = 0.001$), and hiding behaviors significantly increased ($p = 0.041$) with number of visitors. This suggests that large groups of visitors may increase stress, but more research is needed to test and ensure the well being of this endangered species.

P-240: LINDSEY MEADOR

Development of social bonds through play among captive juvenile and adult bonobos (*Pan paniscus*)

FACULTY SPONSOR(S): MONICA WAKEFIELD, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: Play behavior is common in most social species, but usually typifies the juvenile life-history stage and is rare in other age groups. Play in bonobos (*Pan paniscus*), however, occurs throughout all ages. This suggests that play confers social benefits, such as the creation and maintenance of social bonds. I examined the development of play relationships in juvenile-adult dyads at the Cincinnati Zoo. I observed a male juvenile from Feb - Aug 2014, and found that his preferred play partners were also preferred partners for other social interactions, supporting the hypothesis that play is important in the creation of social bonds.



P-241: DORIAN BERRY

Transition from slavery to freedom

FACULTY SPONSOR(S): SHARYN JONES, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: During America's slave era (approximately 1619-1863) the sale and trade of slaves for labor became part of a complex economic industry that produced goods and services. In 1863 the Emancipation Proclamation was passed, freeing people who were held as slaves; this would start a the long process that ended slavery. This poster focuses on information from Tennessee and Mississippi, examining slave narratives, documents from plantation owners, archeological finds, and US census data. This evidence will be used to form a picture of the transitional journey related to family life of freed-people who emerged from a two century long slave culture.

P-242: CADENCE BLEVINS

Cross-cultural Methods of Beautification and Body Modification

FACULTY SPONSOR(S): SHARYN JONES, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY; APRIL CALLIS, HONORS

Abstract: This project focuses on cross-cultural methods of beautification and body modification. Because different cultures perceive beauty in different ways, the author will explore how men and women in these cultures express the ideas of beautification and body modification, with an emphasis on comparisons between North America and Sri Lanka. On this poster, the student author will depict these different ideas of beauty and body modification using artistic representation so you can see for yourselves just how unique our world can be.

P-243: IAN TAKAOKA, CORA ARNEY

The Parker Academy: Education and Equal Opportunity on the Underground Railroad

FACULTY SPONSOR(S): SHARYN JONES, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: In 1839, the Parker or Clermont Academy in New Richmond, Ohio was founded by abolitionists Daniel and Priscilla Parker. The Academy's charter was simple yet ambitious: to provide mixed-gender, racially integrated, high quality classical education to residents of Clermont County. While the school closed in 1892, the academy was a prominent abolitionist institution in southern Ohio, and a significant location on the Underground Railroad. By examining a large repository of historical documents and through archaeological excavation and analysis, we hope to provide insight into the daily life of the Clermont Academy's diverse student base during its operation.

P-244: LAUREN JAMES

Constructing the Self in an Advanced Technological World - A Psychological and Sociological Perspective

FACULTY SPONSOR(S): BONI LI, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: We spend our lives surrounded by technology and subject to social media. We are immersed in our computers, iPads, and for many of us, our cell phones have become an extension of our hand. We are constantly tuned in. But what are we tuning out? How does one construct a personality within our social media hungry world? How do these millions of personalities compose a society? The fields of both Psychology and Sociology provide us with tools and theories that can help us better analyze the ways in which people are impacted, individually and as a group, by these advancements.

P-245: TYLER KIEFER

The Social and Recreational Benefits of Special Olympics and a Brief History of the Organization

FACULTY SPONSOR(S): MELISSA JONES, TEACHER EDUCATION

Abstract: Families, Professionals, and Exceptionality - Positive Outcomes Through Partnerships and Trust by Turnbull, Turnbull, Erwin, Soodak, and Shodren identifies eight family functions that are important to the overall well-being of every individual. Those eight family functions are; Affection, Self-Esteem, Spirituality, Economics, Daily Care, Socialization, Recreation, and Education. Of those eight, I believe that individuals with disabilities often miss out on Socialization and Recreation the most, especially after high school. My goal was to see firsthand how Special Olympics may fill that void, and the type of impact it has on not only the athletes, but also the parents, coaches, and anyone involved.

P-246: TIA MCINTOSH-TRUEAX

Teachers' Utilization of Mastery Learning Techniques in the Classroom

FACULTY SPONSOR(S): PORSHA ROBINSON-ERVIN, TEACHER EDUCATION

Abstract: Mastery learning is an instructional system proposed by Benjamin Bloom. This system includes formative assessments used by educators to measure a student's level of mastery across academic content areas. The results of these assessments are then combined with various instructional strategies to facilitate a student's academic growth. To determine the use of mastery learning techniques, researchers administered an investigative survey regarding teaching methods implemented across Northern Kentucky schools. The results of the study examine teacher implementation and perceptions of mastery learning techniques. Study results have implications regarding the education of Northern Kentucky students and professional development for local educators.

P-247: ASHLEY BURST

The Implementation of Contingency Management to Increase Self-Empowerment

FACULTY SPONSOR(S): STEPHEN WALKER, TEACHER EDUCATION

Abstract: This behavior change project was designed to increase the number of times a student verbally requested help at school. The student was 17 and in an eleventh grade MSD unit. I took baseline data using event recording that revealed the student very rarely asked for help when needed. Instead, she would look for cues or prompts of what to do or say "I don't know." We discussed the value of asking for help and then implemented a behavior contract. The number of requests increased and the data reveals a positive trend indicating that the project was successful in increasing the desired behavior.

P-248: ALEXANDER DRIFMEYER

Increasing Appropriate Responses to Constructive Criticism Using Applied Behavior Analysis.

FACULTY SPONSOR(S): STEPHEN WALKER, TEACHER EDUCATION

Abstract: The purpose of this behavior intervention program was to decrease a third grade student's latency between hearing constructive criticism and responding in a productive manner. According to baseline data, the student typically shut down or acted out whenever he was told to fix a mistake he had made. This behavior resulted in too much time off task. A simple AB design was used. Rewarding the student for responding correctly to constructive criticism in a timely manner resulted in significantly increased time on task after only a few days of intervention. Preliminary data suggested potential for success for this program.

P-249: MASON SANDER

Using Contingency Management to Decrease Inappropriate Call-outs in the Classroom

FACULTY SPONSOR(S): STEPHEN WALKER, TEACHER EDUCATION

Abstract: This behavior intervention plan began with the observation that one student continually interrupted the flow of class time with unnecessary call-outs. To address this problem, a positive and proactive behavior change plan was developed to systematically decrease the number of inappropriate call-outs during class. This plan utilized event recording to collect accurate data on the number of inappropriate callouts in a given class period. Positive reinforcement was used to reduce the number of inappropriate callouts. The data showed a relationship between the decrease of inappropriate classroom behavior and the introduction of a desired incentive.

P-250: MEGHAN STICKNEY

Homework Completion Through Student Selected Reinforcers

FACULTY SPONSOR(S): STEPHEN WALKER, TEACHER EDUCATION

Abstract: The purpose of this behavior change program was to increase homework completion. The study was conducted with a 10 year old 5th grader. Two review sheets were given each week that were to be completed on Friday. The baseline data revealed he did not complete

the first three homework assignments. The data collection system used was event recording using a homework check-list. A reinforcer was provided after he completed the goal. By the end of the intervention, the student had reached his goal completing four out of five homework assignments.

P-251: MICHELLE STOLL

Limiting Verbal Interruptions Through Positive Reinforcement

FACULTY SPONSOR(S): STEPHEN WALKER, TEACHER EDUCATION

Abstract: This behavior change project was implemented with a fifth grade student who has autism. The student was making frequent and disruptive verbal interruptions during class. After a couple of weeks of observing and collecting data, it was determined that this student would benefit from a behavior change project. The baseline data revealed that this student was averaging 16 interruptions in a 30-minute period. By differentially reinforcing lower rates of interrupting, and using a behavior contract, he successfully reached his goal of having less than 9 interruptions per class period.

P-252: LAUREN GHOUSE

A Cultural Education Experience: Why Foreign Language Education in High Schools Is Beneficial

FACULTY SPONSOR(S): KAUSA LARSON, WORLD LANGUAGES & LITERATURES

Abstract: Why is foreign language education in high schools so important? Having that former education can be good preparation for college and the world beyond. NKU foreign language majors and minors were asked questions such as how they thought studying another language would affect their future, if their education in high school had an influence on their decision, and if taking another language had helped them prepare for college. The results of the study were in favor of the hypothesis: "Foreign language education in high schools is beneficial to the furthering of one's education and future plans".

P-253: SARAH HOPPENJANS, CASSIE BRENDLE

Herpetological Survey of St. Anne's Wetlands and Piner Property Before and After Ecological Restoration

FACULTY SPONSOR(S): RICHARD DURTSCHKE, BIOLOGICAL SCIENCES

Abstract: Returning a degraded ecosystem to healthy conditions can be a difficult and expensive task. Investors would want to see the rewards that can come from such projects. In this experiment, herpetological surveys will be conducted in two areas before and after their wetland habitats are reconstructed. These surveys will consist of using various field devices to mark and recapture species of amphibian and reptile. These surveys will be compared to results at an ecologically established property. This study could help monitor future ecological restorations and be a new way to measure the success of wetland restorations.



HONORS PRESENTATIONS

WEDNESDAY, APRIL 22 &
THURSDAY, APRIL 23 | UC 135

Detailed schedule at: honors.nku.edu

H O-1: TAYLOR MELTON

Self-Efficacy and Nursing Student Success

FACULTY SPONSOR(S): LOUISE NIEMER, NURSING

Using a quantitative research design, this project involved surveying freshman and senior nursing students regarding self-efficacy. The General Self-Efficacy Scale was used to assess the self-efficacy of each student participant. Results of the survey were correlated to selected grades. The p value obtained by linear regression indicated no significant evidence between self-efficacy and academic grades. This held true for both freshman and senior students.

H O-2: CHELSIE BREWER

Stimulant and Antipsychotic Co-Administration: Long-Term Effects on Behavioral Development

FACULTY SPONSOR(S): MARK BARDGETT, PSYCHOLOGICAL SCIENCE

The use of antipsychotic (AP) drugs for childhood psychiatric disorders has increased dramatically over the last 20 years. These drugs are prescribed mainly for disorders such as attention-deficit hyperactivity disorder (ADHD) for which they have not been approved. Since most children who are prescribed APs also receive treatment with psychostimulant drugs, research on the long-term effects of early-life AP administration would profit in greater knowledge and relevance by focusing on the interaction between APs and stimulant medication. The study will examine the long-term behavioral effects of risperidone and DAMP co-administration during development. Two key measures will be quantified: locomotor activity and working memory. Increased locomotor activity can be equated to hyperactivity, and working memory impairment can cause reduced cognitive function.

H O-3: BRITT MAHAN

When in Disgrace, Hap'ly I Think On Thee

FACULTY SPONSOR(S): BRIAN ROBERTSON, THEATRE & DANCE

Go back to age 16. When anything that went wrong made you want to die. When that first love was all-consuming. When your friends were your family and you were nothing without them. It all seems so silly now, looking back. We lived through the changes, the hormones, the feelings. My capstone project is the Studio 307 production of *When in Disgrace, Hap'ly I Think On Thee*, a play based on the true story of three young friends that left one dead, one his murderer, and one who tried to save them both.

H O-4: ALEXANDER WEIGLEIN

The Role of Food Perceptions in Eating Disorder Behavior

FACULTY SPONSOR(S): DOUGLAS KRULL, PSYCHOLOGICAL SCIENCE

Eating disorders are often complex and can be difficult to treat. Much research has been done to investigate both the causes and factors that maintain these disorders, but little has been done with regard to an individual's perceptions of food. This study investigates several aspects of the relationship between individual and food, particularly focusing on cooking and calorie counting behaviors, as well as perceptions of those behaviors. Understanding this relationship might provide insight into the



maintenance and manifestation of these disorders, as well as providing structure on which better treatment options can be constructed.

H O-5: MEGAN KLOSS

What Can You Do with a Degree in Psychology?

FACULTY SPONSOR(S): JIM THOMAS, PSYCHOLOGICAL SCIENCE

What do you think of when you hear the term psychology? A shrink? Or maybe a researcher? While these are both places you may find a psychologist, there are also many more. From teaching to police officers to business managers and even lawyers, psychology provides a solid foundation for many career opportunities. This project is a compilation of various career opportunities with the intent to educate others on the endless possibilities a psychology major has. So to answer the question of what can one do with a degree in psychology; you can do almost anything!

H O-6: LEE EPLING AND BRANDON HINKEL

PENTEST in a Box

FACULTY SPONSOR(S): YI HU, COMPUTER SCIENCE

Network security assessments and penetration testing have a reputation of being time consuming, costly, and general difficult. However, not doing a proper security assessment can cause even greater problems when unknown issues lead to a security breach, jeopardizing the existence of the business affected. By using an inexpensive Raspberry Pi and freely available tools, we have created a DIY tool for network security and penetration testing activities.

H O-7 TAYLOR CUMMINS

The Evolution of Video Games: Hobby to Cultural Phenomenon

FACULTY SPONSOR(S): ALI GODEL, HONORS

Media is ever evolving and becoming a more important aspect of everyday life. Video games, for example, are something many people enjoy on a daily basis. Through this research, I explore the cultural and social implications of video games in the contemporary world. In addition, I explore the duality of video games and culture and how they both influence and reflect each other. This form of media has gone from a simple hobby to a communication medium, a learning tool, and a reflection of society as a whole.

H O-8: HELENA SIZEMORE

Explorations of Culture through Design: Drums in Cross-cultural Context

FACULTY SPONSOR(S): JUDY VOELKER, SOCIOLOGY, ANTHROPOLOGY & PHILOSOPHY

Abstract: Drums are often viewed as three dimensional forms of art and may be used in ritualistic ceremonies as well as everyday life. Using drums in the collection of the NKU Museum of Anthropology, this project began with an assessment of each artifact and continued with the portrayal of culture through exhibition design. The focus was on the many uses of drums across cultures and in global context. Outcomes of this project were the design and installation of a month long exhibit at the Ft. Thomas Library and special programming aimed at young children.

H O-9: LAUREN KOOP

Playing on the Mind

FACULTY SPONSOR(S): TAMMIE SHERRY, TEACHER EDUCATION

"Playing on the Mind" is a close look at how genres besides classical music might effect a student academically. Specifically, "Playing on the Mind" is a project that observes the effects instrumental jazz and instrumental rock music has on reading comprehension test scores. This project focuses specifically on how these genres of music affected fourth and fifth grade students during a thirty minute period of reading a story and answering questions. These test scores were then compared to tests taken with no music to gauge the difference the instrumental music might have made to students' abilities to comprehend the text. Data was collected over an eight month period with approximately one hundred students involved in the testing process.

H O-10: LAUREN RUPP

Don't Judge a Book by Its Film

FACULTY SPONSOR(S): KRISTIN HORNSBY, HONORS

Abstract: Divergent, The Host, and The Twilight Saga are just a few examples of book-to-screen adaptations that became inspirations for my Capstone. My project is a creative exploration into the process a screenwriter must undergo to transform a literary work of art into a masterpiece for a visual stage. With help from my mentor, I researched the process and formatting of film scripts to guide my own transformation. Another aspect of my project involves preparing a pitch that would be worthy of being presented to a production company in an effort to make this academic project into a future cinematic reality.

H O-11: KAITLYN GERRETY

The Diary of Death Row

FACULTY SPONSOR(S): MARCOS L. MISIS, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

The first part of the project, the literature review, documents many aspects of the death penalty pertinent to the audience's knowledge and understanding of the topic. Sections covered include an introduction, a history of the death penalty in the United States, demographic characteristics, public perceptions, and living conditions on death row. This portion of the project's purpose lies in informing the audience before discussing the creative aspect. The second portion of the capstone looks at the cases of several death row inmates. Some have been executed, some have been exonerated, some are living out life sentences, and some are living as free citizens. Each, however, is unique in their story and in their struggle, and none deserve to die for the crime for which they are convicted.

H O-12: OLIVIA HAGEDORN

An Exploration of the Roles of Gender and the Bible in John Steinbeck's East of Eden

FACULTY SPONSOR(S): TONYA KROUSE, ENGLISH

My capstone involved research on John Steinbeck's epic 600-page novel East of Eden. Steinbeck focuses on themes related to the Biblical parallels he makes in his book, such as rejection and universality. However, upon research and close reading, I found that his ideas could implicitly be applied to the female vs. male dichotomy in the novel, as well as the role women play in Steinbeck's work. In exploring themes of gender, I make comparisons between Steinbeck and his contemporary, Simone de Beauvoir to explain the view of women in mid-century society as related to the ideas of womanhood that Steinbeck presents.

H O-13: EMMA ROSE THOMPSON

"I took my Power in my Hand": NKU Students Create Emily Dickinson Art

FACULTY SPONSOR(S): ROBERT K. WALLACE, ENGLISH

Abstract: Since 1994, Professor Robert K. Wallace has offered a creative option for the final project in his English classes—resulting in a vast collection of student artwork inspired by Emily Dickinson in particular. I present my art exhibition and catalog recording this body of work. Dr. Wallace and I worked one-on-one with the Steely Library to plan and install this exhibition, create the accompanying catalog, and plan the related events: a marathon poetry reading, student artist panel discussion, and Dickinson tea party. This project gives a comprehensive view of how teaching literature through art can be a rewarding experience.

H O-14: ALEXIS SPRINGELMEYER

Making Memories and the Memories that Make Us

FACULTY SPONSOR(S): ALI GODEL, HONORS

Abstract: My creative project focuses on how exchanges with others in our pasts can become monumental memories and have a lasting impact on us. It explores narratives that young adults shared when asked about a memory of an exchange with another person which has made a lasting impact on their identity. Each interview has been recorded and transposed into writing. Then, the written stories have been published in a blog called, "Making Memories and the Memories that Make Us."

H O-15: JANE KREUTZER

The Effects of Outsourcing and Offshoring on the Accounting Industry and My Job Outlook

FACULTY SPONSOR(S): DENISE LUETHGE, MANAGEMENT

As technology continues to improve and become increasingly present in everyday life around the world, it isn't as necessary for businesses to have an in-house accounting department since there are so many other options. The accounting industry has earned a reputation of being outsourced out of companies either to other businesses, or other countries completely. I am looking at the effect that this is having on the accounting industry itself, as well as the effect that it has on me as I look for jobs after graduation as someone with an accounting degree.

H O-16: SARA M. SHARPE

This Is Your Brain On Drugs: Effects of a Biological Explanation on Attitudes Toward Heroin Users and Responses to Heroin Addiction

FACULTY SPONSOR(S): PERILOU GODDARD, PSYCHOLOGICAL SCIENCE

Northern Kentucky is experiencing a heroin epidemic, and activists are advocating for harm reduction programs including overdose prevention, syringe services, and medication-assisted treatment. Opposition to these treatment options remains widespread in this area. This experiment will test the possibility that presenting a biological explanation of heroin addiction may change attitudes toward heroin users and harm reduction programs.

**H O-17: BRANDY REXROAT*****Finding the Place of Religion in the Government***

FACULTY SPONSOR(S): SHAUNA REILLY, POLITICAL SCIENCE, CRIMINAL JUSTICE & ORGANIZATIONAL LEADERSHIP

The Supreme Court of the United States has the ultimate decision making power in terms of the authority of the law. When the Founding Fathers designed the government they sought to create a government that protected the individual liberties of its citizens including the freedom of religion. There have been many entanglements of law and religion which have ultimately ended with a decision handed down by the Supreme Court. This capstone is an analysis of what factors could have impacted the final opinion of the court in cases involving religion.

H O-18: TYLER KIEFER***The Social and Recreational Benefits of Special Olympics***

FACULTY SPONSOR(S): MELISSA JONES, TEACHER EDUCATION

Families, Professionals, and Exceptionality – Positive Outcomes Through Partnerships and Trust by Turnbull, Turnbull, Erwin, Soodak, and Shodren identifies eight family functions that are important to the overall wellbeing of every individual. Those eight family functions are; Affection, Self-Esteem, Spirituality, Economics, Daily Care, Socialization, Recreation, and Education. Of those eight, I believe that individuals with disabilities often miss out on Socialization and Recreation the most, especially after high school. My goal is to see firsthand how Special Olympics may fill that void, and the type of impact it has not only the athletes, but also the parents, coaches, and those involved.

H O-19: SARAH EMMONS***Exploring Improvisational Techniques for Performance***

FACULTY SPONSOR(S): HEATHER BRITT, THEATRE & DANCE

In studying the work and practices of Rudolf Laban, William Forsythe, Gaga technique, contact improvisation, and the embodiment of music I have been able to explore and test the waters of some of the greatest choreographers and techniques of all times, that will inspire the direction of my improvisational piece. These analyses of movement have such knowledge and experience with dance and movement that I am and will be forever in awe and a student to their philosophies. I hope to push my boundaries, discover something different, and make something beautiful in my exploration.

H O-20: ABBEY SCHERER AND ZAC THOMAS***Teach Me to Teach You: Nurses as Educators***

FACULTY SPONSOR(S): SANDRA GRINNELL, NURSING

Healthcare professionals provide patient teaching in an effort to maintain positive patient outcomes. This project focuses on the relationship between nurses and patients regarding patient education. In nursing curriculums, students are not taught how to teach patients. The literature

supports “teach-back” as the most effective teaching method. Therefore, a qualitative research design was used to determine how nurses teach patients and how patients receive the teaching. In conclusion, inexperienced nurses do not understand how to apply the teach-back method as well as experienced nurses do. Also, interventions such as the learning needs assessment are overlooked in the healthcare setting.

H O-21: MARY VON LEHMAN***Cultural Competence: A Cornerstone in Nursing***

FACULTY SPONSOR(S): ADELE DEAN, NURSING

This project began with investigation of transcultural nursing theories, cultural competency education, and health disparities. The information gathered was organized and incorporated into the Nursing Blackboard site labelled “Cultural Nursing 101,” which included five educational modules on cultural competence and awareness. Comparison of pre- and post- test scores revealed that after the modules were complete, students reported higher levels of comfort interacting with culturally diverse patients, awareness of important cultural terms, knowledge of other cultures’ traditions, beliefs & practices, desire to seek enhanced cultural competence, awareness of barriers in accessing health services, and awareness of assessment tools and other resources.

H O-22: ETHAN DOWDEN***An Exploration of Humanities***

FACULTY SPONSOR(S): STEPHEN LEIGH, ENGLISH

The title really says it all. I used the medium of short fiction to explore myself the role of humanities in the world today. How useful is the discipline in the job market? What would the world be like without humanities. These are the questions I asked myself close to graduation, and this project was my way of answering those questions for myself.

H O-23: CHRIS TAYLOR***When Science is Less Scientific Than Science: Implicit Public Perception of Natural Science Versus Behavioral Science***

FACULTY SPONSOR(S): DOUGLAS KRULL, PSYCHOLOGICAL SCIENCE

The age old “debate” on whether psychology is scientific or not still lingers in today’s society. Despite employing the scientific method, public perception of psychology is often viewed as less scientific than biology, chemistry, and other natural sciences. The current state of this public perception has implications that may lead, through our elected officials and other avenues, to less support for psychology as well as less funding for psychological research. To further examine this public perception, a study using the Implicit Association Test will measure subject’s implicit perceptions about whether natural science topics (i.e. chemical reaction, cancer research) are more or less scientific than behavioral science topics (i.e. clinical depression, anxiety.)

MASTER OF ARTS: TEACHER AS LEADER POSTER PRESENTATIONS

MONDAY, MAY 4 AT 4:30PM | UC 375

MATL P-1: KACIE L. ADAMS-BROWNING

The Effects of Sustained Silent Reading on Reading Scores and Attitudes Toward Reading

FACULTY SPONSOR: KYRA SHAHID, TEACHER EDUCATION

Abstract: A mixed methods research approach was taken to answer the research questions: "how does a sustained silent reading program impact student attitudes toward reading; and, how does a sustained silent reading program affect reading scores?" Both qualitative and quantitative data were collected throughout the course of this study.

MATL P-2: JAYME RICHESON BRUN

Sensory Activities for Learning

FACULTY SPONSOR: SHELLI WILSON, TEACHER EDUCATION

Abstract: This research investigated sensory activities that increase learning and retention. Using two or three sensory activities and allowing students exercise time to stretch certain muscles, data were collected on the effectiveness of these activities.

MATL P-3: MELISSA CALL

The Impact of a Full Immersion Experience on Student Achievement

FACULTY SPONSOR: CHRIS COOK, TEACHER EDUCATION

Abstract: This study examined the impact of a full immersion experience on student performance in an effort to maximize student achievement and mastery of content of the French language.

MATL P-4: SHELLY CONLIN

Behavior Modification Strategies for Students with Autism

FACULTY SPONSOR: SHELLI WILSON, TEACHER EDUCATION

Abstract: This research involved several methods of behavior management to answer the question: "are the same behavior modification strategies used for students with mild disabilities and Autism effective for those with moderate and severe disabilities?"

MATL P-5: JAMIE DAWSON

Homework Helper: A Case Study to Determine the Effectiveness of Remind 101

FACULTY SPONSOR: CHRIS COOK, TEACHER EDUCATION

Abstract: This research study examined the effectiveness of homework text message reminders for increasing homework completion. Sixth-grade students from Northern Kentucky received two text messages per day from the Remind 101 program regarding homework. The data collected show a positive relationship between the reminders and homework completion.

MATL P-6: SARAH DIESEL

Inquiry Circles to Improve Test Scores and Writing in the Content Areas

FACULTY SPONSOR: CHRIS COOK, TEACHER EDUCATION

Abstract: This study investigated the effect of inquiry circles on student writing in the science curriculum. Participants were first-grade students in an elementary classroom in Northern Kentucky.

MATL P-7: AUBREY ECKERLIN

How Does Organization Impact Student Achievement?

FACULTY SPONSOR: CHRIS COOK, TEACHER EDUCATION

Abstract: This study was conducted in a fifth-grade reading class to explore the correlation between student organization and student achievement in the classroom. Students used a planner, a weekly assignment checklist, and a folder to keep organized. Throughout the rotations, students used their assignment checklist to ensure they were completing the required assignments.

MATL P-8: SARA FAY

Flipping the 6th Grade Math Classroom

FACULTY SPONSOR: LENORE KINNE, TEACHER EDUCATION

Abstract: This study explored the effectiveness of a flipped classroom. Assessment data on the flipped unit was compared to that of last year's class, which did not have a flipped classroom.

MATL P-9: CHELSEA FEE

Organizational Skills and Academic Achievement: Are They Related?

FACULTY SPONSOR: CHRIS COOK, TEACHER EDUCATION

Abstract: This case study explored how implementing a new organizational system affected the academic success of fifth-grade

students at an elementary school in Northern Kentucky. Academic success was measured based on class work, homework, and parent communication.

MATL P-10: KATHARINE GRAJEWSKI

Research Communication Interventions for a Child with Severe Disabilities

FACULTY SPONSOR: CHRIS COOK, TEACHER EDUCATION

Abstract: The goal was to find out if early intervention programs have an impact on young children with severe disabilities. The participant was a severely disabled female toddler who lived in a home for disabled children. Probes, journal, and a survey were used to keep track of progress. One-on-one interventions increased the participant's ability to clap upon request.

MATL P-11: JENNIFER HARRIS

Teacher Perspective Regarding Co-teaching

FACULTY SPONSOR: KYRA SHAHID, TEACHER EDUCATION

Abstract: Co-teaching is becoming the preferred method of providing specially-designed instruction for students with disabilities; however, not all teachers believe in the benefits of co-teaching. This study explored whether or not teachers' perceptions affected their implementation of co-teaching.

MATL P-12: NICK HEINEKE

Increasing Dispositions in Low-Achieving Math Students through Engagement in an After-School Enrichment Program

FACULTY SPONSOR: CHRIS COOK, TEACHER EDUCATION

Abstract: This research investigated whether lower-level students in a high school mathematics class perform better in an after-school format. The research question was, "do the students see the importance of mathematics, as it related to the ability to solve problems critically and creatively?"

MATL P-13: REBECCA HEINEKE

Project-based Learning and the Effect on Learning Outcomes in the World Language Classroom

FACULTY SPONSOR: CHRIS COOK, TEACHER EDUCATION

Abstract: This study explored the effectiveness of project-based learning in a world language classroom.

MATL P-14: ASHLYN HIGHFIELD

Differentiating Word Study

FACULTY SPONSOR: LENORE KINNE, TEACHER EDUCATION

Abstract: This research study investigated whether the regular use of math journals would increase student ability to problem-solve. Pre- and post- assessments along with journal entries were used to look for progress in students' work.

MATL P-15: KAYLEIGH KINMAN

How Does Student Reward Choice Impact Behavior?

FACULTY SPONSOR: CHRIS COOK, TEACHER EDUCATION

Abstract: This case study was completed with one 9th grade student who participated in a Behavior Support Program at his school. The purpose of this research study was to determine if student choice of reward received for specific behaviors impacted that student's behavior. The student was monitored through behavior point sheets and data were analyzed to determine if the student's choice of reward had any impact on his behaviors.

MATL P-16: NICOLE KOTTMYER

Students with Disabilities Increasing Their Time on Tasks

FACULTY SPONSOR: CHRIS COOK, TEACHER EDUCATION

Abstract: This study investigated the effectiveness of a variety of strategies for increasing the amount of time spent on-task behaviors by students with disabilities.

MATL P-17: ERIK LARSON

Learning Logs in Math Instruction

FACULTY SPONSOR: CHRIS COOK, TEACHER EDUCATION

Abstract: This research study investigated the relationship between the use of learning logs during math class and student progress on assessments. Subjects were 5th grade students from an accelerated math class in an elementary school in Northern Kentucky. The study consisted of two phases with both pre-test and post-test data collection that was later analyzed.

MATL P-18: CASSIDY LAWRENCE

Encouraging Classroom Participation: Positive versus Negative Reinforcement

FACULTY SPONSOR: CHRIS COOK, TEACHER EDUCATION

Abstract: This study examined whether swift and consistent negative

consequences motivate students to participate in class more so than positive reinforcements. This project was conducted with groups of 5th grade students who struggled with regular and appropriate classroom participation, regardless of the positive incentives that were offered.

MATL P-19: RYAN LUBBERS

The Effect of Homework Assessment Methods on Student Achievement in High School Mathematics

FACULTY SPONSOR: CHRIS COOK, TEACHER EDUCATION

Abstract: This study investigated whether homework assignments had an effect on student achievement in high school mathematics. A class of 9th grade Algebra I students had their homework assignments graded while another class of students did not have their assignments graded. Data was collected to see how the assignments affected student achievement.

MATL P-20: TIFFANIE MAINES

Using Creative Teaching to Incorporate all Learners

FACULTY SPONSOR: CHRIS COOK, TEACHER EDUCATION

Abstract: This study was conducted in a high school French class to see how effective differentiated and creative instruction is in the classroom.

MATL P-21: JESSICA MORRIS

Can Relaxing Music Positively Affect Test Scores?

FACULTY SPONSOR: CHRIS COOK, TEACHER EDUCATION

Abstract: The purpose of this study was to determine the effects of relaxing background music on student test scores. The participants being studied were male and female third-grade elementary students. Two classes were involved in the study. One class was tested in silence while the other listened to a mixed CD of instrumental classical music during the test.

MATL P-22: DENNIS MURPHY

Solving the Media Storage Problem

FACULTY SPONSOR: SHELLI WILSON, TEACHER EDUCATION

Abstract: In an Advanced Multimedia class, which consists mostly of video editing and production, the video projects can create huge files and make it challenging to have multiple projects going at one time. This research study sought solutions to address this problem.

MATL P-23: SARAH NEIKIRK

Teaching Students with Disabilities to Work Independently

FACULTY SPONSOR: CHRIS COOK, TEACHER EDUCATION

Abstract: This research study looked at how students with disabilities learn to work independently. The goal of this research project was to implement strategies in a structured setting that would allow students to complete work independently throughout the school day.

MATL P-24: ALLISON PELFREY

Whole Group vs. Center-Style Learning: Exploring Styles in a Special Area Classroom

FACULTY SPONSOR: KYRA SHAHID, TEACHER EDUCATION

Abstract: This study investigated the outcomes after conducting a unit using whole group and center-style instruction. Four classes of 4th grade students from an elementary school in Northern Kentucky took a pre-assessment on culture before the unit. Two classes were taught using a whole group method while the other two classes were taught in the center-style method.

MATL P-25: PATRICK PIDGEON

Motivating Students to Participate in Physical Education Class

FACULTY SPONSOR: LENORE KINNE, TEACHER EDUCATION

Abstract: This study used a quantitative approach and group comparison to answer the research question: "will students be motivated to participate in physical education if they have a choice of activity?" Students were given a choice of activities in their physical education class to determine whether this increased the level of participation.

MATL P-26: VICTORIA PHILLIPS

A Comparison between the Flashcard Method and a Kinesthetic Approach of Sight Word Instruction in Relation to Sight Word Recognition in Kindergarteners

FACULTY SPONSOR: CHRIS COOK, TEACHER EDUCATION

Abstract: This study, conducted in a kindergarten classroom, examined the relationship between the flashcard method and a kinesthetic approach of sight word instruction to sight word recognition. The findings offer a comparison between these two methods and discuss the effectiveness of each approach.

MATL P-27: ALEXANDRA SCOTLAND

Managing Student Behavior Using Praise in a Functional Mental Disabilities Classroom

FACULTY SPONSOR: KYRA SHAHID, TEACHER EDUCATION

Abstract: This study explored the impact of positive praise on student

behavior. The targeted group of students were receiving special education services in a Functional Mental Disabilities unit in grades third through fifth.

MATL P-28: ELIZABETH SINGLETON

How Utilizing Adult Learning Principles Impacts Parent/Caregiver Involvement

FACULTY SPONSOR: LENORE KINNE, TEACHER EDUCATION

Abstract: This research study evaluated the impact of utilizing an adult learning style survey to differentiate information delivery methods to adult caregivers of children receiving early intervention services. Results concluded that differentiating information delivery based on specific learning styles resulted in increased participation by the adult caregiver.

MATL P-29: BENJAMIN A. TILLEY

How Second Language Acquisition Theory, Standards, & Teaching Strategies Impact a French Teacher's Use of English during Instruction

FACULTY SPONSOR: CHRIS COOK, TEACHER EDUCATION

Abstract: This study examined how the use of English in the French classroom impacts the teacher's instruction, student participation, and student use of French. One of the methods used involved the impact motivation has on student participation in the second language. The conclusion is that when students are visually aware of an incentive, their level of participation increases.

MATL P-30: ROBERT WEGFORD

The Effects of Student Self-Assessment on Learning and Behavior

FACULTY SPONSOR: KYRA SHAHID, TEACHER EDUCATION

Abstract: This study investigated the effects of student self-assessment on academic performance and behavior. Participants in this study included 56 twelfth-grade chemistry students. Students were broken into two groups: students who were taught student self-assessment techniques and students who were not. Academic progress and behavior were tracked over a five-week period.

MATL P-31: LINDSEY WILDER

Free Time-Free Writes: The Implementation of Journal Writing

FACULTY SPONSOR: CHRIS COOK, TEACHER EDUCATION

Abstract: How does student choice impact writing in the middle school classroom? This study analyzed the impact of implementing a timed writing strategy that encouraged student choice.

MATL P-32: ELIZABETH WOJTKUN

Examining the Impact of Formative Assessments in an AP Government Course

FACULTY SPONSOR: SHELLI WILSON, TEACHER EDUCATION

Abstract: This research study focused on the impact of various assessments for Advanced Placement (AP) high school students to determine whether formative assessments improve student learning at the AP level.

MATL P-33: ROBIN DUTKEVITCH YOUNG

Best Practices for Scaffolding Instruction in the Writing Classroom

FACULTY SPONSOR: CHRIS COOK, TEACHER EDUCATION

Abstract: The task of teaching students to write is complicated by the need to evaluate a large volume of student work in a short time frame to ensure feedback is both timely and effective in building student skills as each writing piece develops. This study examined methods of providing such feedback to determine if method of evaluation has an impact on student writing.

MATL P-34: KATIE WILSON

Does Reading Influence Speaking Fluency in a second language?

FACULTY SPONSOR: LENORE KINNE, TEACHER EDUCATION

Abstract: This study, conducted in Spanish classes in a northern Kentucky school, found that students who were assigned extra readings in the target language had slightly higher scores on a speaking presentation and on the end of unit test.

MATL P-35: JOHN ZIGGAS

Structure to Cooperative Learning by Timed Discussions

FACULTY SPONSOR: CHRIS COOK, TEACHER EDUCATION

Abstract: This study was conducted in two 9th grade history classroom and examined the effects of using timed discussions for groups to evaluate if retention of material will increase with timed discussions. The findings of this study show that retention for students who used time discussions was up 20 percent, compared to the students who did not use time discussions.

LIVE STUDENT PERFORMANCES:

ARTISTS, ENTERTAINERS, MUSICIANS, AND PERFORMERS



CONCERT BAND

Joe Ball
Scott Brown
Alyssa Farmer
Sam Faulkner
Rachel Gasser
Josh Jahnke
Katie Knapp
Taylor Leach
Laurie Mauer
Austin Moore
Alexandria Nance
Zach Neal
Zak Nova
Barbara Phillips
Sage Ritchie-Hempstead
Mason Stewert
Brenton Stirm
Courtney Taylor
Emily Thomas
Kayla Upthegrove
Raquel Rodriguez, conductor

DANCE TROUPE

Karly Brungs
Maddie Burgoon
Lauren Crawford
Chris Darnell
Kiersten Edwards
Sarah Emmons
Caleb Farley
Jessica Foote
Samantha Reynolds
Amanda Miller
Brian Spencer
Molly Watson
Andrew Wiemann
Margie Wiemann
Kat Wolf
Tracey Bonner, director

et cetera! SMALL WORLD THEATRE COLLECTIVE

Mackenzie Boyd
Syreeta Briggs
Angel Kerns
Bryce Liebert
Joshua Newman
Kyle Reihmer
Ne'Tarra White
Dr. Daryl Harris, director

MUSICAL THEATRE SCENE/SONG SHOWCASE

Katelyn Alteri
Andrew Blake
Jean Hattie Clark
Anna Rose DeLeon Guerro
Gabriella Francis
Anthony Giver
Taylor Greatbatch
Hallie Hargus
James Jones
Maria Menzer
Annie Mulcahey
Gretchen Priddy
Kristin Schisler
Anne Schneider
Kyle Taylor
Trace Young
Jamey Strawn, director

MUSICAL THEATRE SOLO PERFORMANCES

Rhys Boatwright
Emily Borst
Maddie Burgoon
Sophia DeWald
Jennifer Fraser

Julie Gallagher
Zachary Hollman
Katherine Jackson
Leiren Jackson
Kelly Lumbert
Caitlyn Maurmeier
Kaitlin McCulloch
Jensen O'dell
Xander Wells
Margaret Wiemann
Kayla Woods
Justin Woolums
Jacob Spicer
Jamey Strawn, director

MUSICAL THEATRE TOUR TROUPE

McKynleigh Abraham
Rhys Boatwright
Andy Burns
Melissa Cathcart
Dakota Dean
Gabriella Francis
Hallie Hargus
Brandon Huber
Kathryn Klens
Jack Manion
Trey Paris
Andrea Squires
Megan Urz
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Pascal LeRoy
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Ivy Mowry
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Christopher Horn
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