ANNUAL REPORT OF UNDERGRADUATE RESEARCH FELLOWS

August, 2012 to May, 2013

COLLEGE OF BUSINESS AND PUBLIC AFFAIRS

SCHOOL OF BUSINESS ADMINISTRATION

Bard, Traci

Major:
Marketing

Faculty Mentor:
Janet Ratliff

Research/Project Title:
A Preliminary Examination of Sustainable Disclosures on Fortune 500 Company Websites

Project Abstract/Summary:
The purpose of this research study was to examine what Fortune 500 companies are reporting on their corporate websites regarding environmental sustainability activities (actions). Sustainable actions were divided into eight categories: (product, production, plant, supply chain, recycle, consumer, social, and greenwash). Frequencies, chi-square and cross-tab tests of indepdendence were conducted to determine the number of sustainable actions, and whether or not size of the firm or the industry influenced what and how many sustainable actions were posted. Findings suggest that more than three-fourths of companies examined engage in one or more sustainable actions. Furthermore, industry and siize of the firm had a direct influence on sustainability reporting. Research was supported by Morehead State University Undergraduate Research Fellowship.

Project Dissemination:

Poster Presentation:
Bard, Traci and Janet Ratliff (2013, April). A Preliminary Examination of Sustainable Disclosures on Fortune 500 Company Websites, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:
Allied Academies, Inc has selected this research for publication in an upcoming edition of the Academy of Strategic Management Journal and recognized the research with the Distinguished Research Award.

Post-Graduation Plans (Seniors only):
N/A.

Bailey, Caitlin

Major:
Accounting

Faculty Mentor:
Johnathan Nelson

Research/Project Title:
Trigger Events: Early Life Experiences Fostering Leadership Development

Project Abstract/Summary:
Ethical leadership is a critical determinant of organizations success. Thus, it is important to understand how ethical leadership is developed. Ethical leaders possess personal integrity and actively promote ethical behavior. While research has identified many influences on leader development, less attention has been devoted to the influence of early life experiences on leadership development, particularly in regards to ethical leadership. To address this gap in the literature, this research involved conducting a qualitative study using a histriometric method, to identify early life experiences that trigger ethical leadership. By more thoroughly examining the events that spark individuals to become ethical leaders, we will be able to more effectively meet ethical leader development needs in organizations. This research was also supported in part by Booth Endowment funding.

Project Dissemination:

Oral Presentation:

Bailey, C. and Nelson, J.K. (2013, April). Early Life Experiences Fostering Ethical Leadership Development, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

Certificate of Exceptional Merit (Oral Presentation; College of Business and Public Affairs), Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Post-Graduation Plans (Seniors only):

N/A.

Hylton, Brandon

Major:

Finance

Faculty Mentor:

Donna Kizzier

Research/Project Title:

Delta Pi Epsilon Graduate Business Honorary Business Casebook, 2nd Edition

Project Abstract/Summary:

The outcome is a major rewrite of a popular business casebook published (non royalty) by a highly respected graduate research organization (Delta Pi Epsilon). This project entails solicitation, editing, and organization to enable blind peer review (scheduled this spring) by an international peer review board. The second edition of the business casebook includes not only the original cases from the first edition but also almost over fifty new chapters containing business cases with solutions submitted by authors from across the globe. In addition to submissions by national and international accomplished authors/professors, MSU students and senior and junior faculty were encouraged, with success, to submit cases and solutions for consideration for publication. As a result of this effort, several business cases, as well as cross disciplinary cases, were generated by MSU students and/or faculty. The undergraduate faculty fellow in this application co-authored a case with two MSU faculty members and will co-author at least one additional case with the fellow faculty sponsor this summer. The UG fellow not only wrote case(s) for consideration for publication but also assisted in significant ways to book organizational tasks, most working with the case database plus two cloud sites used to coordinate work with authors and the editorial board.

The first edition casebook (Conceptualized, written and edited by Kizzier) was a best seller for DPE; a spinoff Ethics casebook by Meggison (50% of the cases were written by Kizzier) is also very popular. Some state departments of education in the U.S. have purchased these casebooks for distribution to all their high schools; the first edition book is also widely used in post secondary and collegiate classrooms. We are advised by DPE/NBEA leaders that the 2nd edition is eagerly awaited.

Cases stimulate the highest levels of critical thinking in students. DPE was located in Little Rock, Arkansas and recently became an affiliate/partner with the National Business Education Association. Cases in this publication address middle school through graduate level major business functional areas. Introductory chapters written and researched by the casebook author teach professors and teachers how to use the case approach effectively in business classrooms; Kizzier's work in this series of books has been cited extensively.

Project Dissemination:

The 2nd edition Delta Pi Epsilon Business Casebook (by Donna L. McAlister Kizzier) is scheduled for national publication next Fall. The UG Faculty fellow worked with faculty to submit two co-authored cases for consideration for publication in this blind refereed publication.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A.

Mason, Nicholas

Major:

Sport Management

Faculty Mentor:

Steve Chen

Research/Project Title:

Dynamic Pricing: Is It a Smart Way to Generate Income for Small Market Collegiate Athletics?

Project Abstract/Summary:

The popularity and adoption of dynamic pricing in all levels of sport seem to be inevitable. Many sport marketers predict that future sport organizations will pervasively utilize dynamic pricing strategy, a method involving price changes based on different demands and occasions, to generate extra ticket revenues soon. This exploratory study attempts to understant the perception of collegiate athletic administrators on dynamic pricing and tests whether dynamic pricing strategy can be well accepted and implemented at regional, small market collegiate athletic programs. Twenty college/university athletic directors and marketing managers of the (FCS) Football Championship Subdivision, responded to a phone interview by expressing their perceptions toward the use of dynamic pricing. All respondents' institutions were located in the Ohio Valley region and Mid-west. The interview questions addressed two key aspects: (1) the overall impression about the benefits and shortcomings of dynamic pricing, and (2) the willingness and support toward implementing the strategy. The qualitative information was gathered from late July to early October, 2012. In general, the results showed that the majority of respondents preferred the idea of adopting mini-series packages and different season ticket tiers over the use of dynamic pricing. Dynamic pricing is based upon demand. Programs should take pricing advantage basing on high demands. The success may vary basing on the venue and organization. However, respondents expressed that changing the ticket prices frequently was cumbersome. They also did not perceive this strategy would bring excessive financial benefits. Although the marketing literature optimistically projets the popularity of dynamic pricing, respondents of this study sample seemed to reject this notion. In order to make the generalization concerning the applicability of dynamic pricing to all non-major conference athletic programs, future studies should be conducted by including the greater sample population and different geographic regions.

Project Dissemination:

This project has been presented at Posters-at-the-Capitol in 2013. It has also been accepted for the Academy of Business Research Conference in San Antonio, TX. It is scheduled to present around September 18-20, 2013.

Awards and/or Honors:

Posters-at-the-Capitol and Celebration of Student Scholarship.

Post-Graduation Plans (Seniors only):

Mr. Mason plans to work in the racing industry.

Harless, Alicia

Major:

Nursing

Faculty Mentor:

Timothy Hare

Research/Project Title:

Exploration of the Relationship between Mental Health and Lung Cancer Mortality in Kentucky

Project Abstract/Summary:

Lung Cancer is the major cause of cancer-related deaths worldwide, accounting for 1.3 million deaths annually and Kentucky consistantly ranks among the states with the highest rates. Previous research shows that depression is positively correlated with symptom severity and physical limitations among lung cancer mortality and morbidity rates. The data are county-level and include factors such as the number of licensed psychologists, the annual number of poor-mental health days, and lack of social-emotional support. Exploratory spatial data analysis reveals weak to moderate associations among the factors assessed. We conclude that poor mental health has a moderate effect on increasing the rate of lung cancer mortality as a proportion of morbidity.

Project Dissemination:

Poster Presentation:

Harless, Alicia, (2013, April). Exploration of the Relationship Between Mental Health and Lung Cancer Mortality in Kentucky. Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

We expect the products of this research to include professional posters and presentations to be presented at appropriate regional conferences. It is hoped that the results of the study of healthcare service access behavior can be presented to health education organizations in the community. This research project will expose the student to some research methods in health care as well as increase her competitivness in gaining admission to the DNP program, specifically the DNP program at the University of Kentucky.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A.

Tran, Yen

Major:

Economics/Finance

Faculty Mentor:

Ali Ahmadi

Research/Project Title:

Impacts of Economic Reforms on the Expansions of Middle Classes in Southeast Asian Countries

Project Abstract/Summary:

This study investigated whether or not the economic reforms and progress have had a positive effect on the expansion of the size of the middle-class for eleven Southeast Asian countries. Based on established political and economic theories, the study presumes the middle-class has an important role in bringing about political and economic stability of a country. Economic data from World Bank, government websites of these countries, and others were analyzed and various measures of economic development were tested to achieve the results of this study. Results of the study indicate, despite reduction of the poverty in all these countries and heterogeneity of the patterns for these countries, in general, these reforms have not led to the expansion of the middle-class relative to the other socioeconomic classes. This research was supported by the School of Business Administration and the Honors Program.

Project Dissemination:

Oral Presentations:

Yen Tran and Dr. Ali Ahmadi, (2013, January). Impact of Economic Reform on the Expansions of Middle Classes in Southeast Asian Countries, Kentucky Honors Roundtable Annual Conference, University of Kentucky, January.

Yen Tran, and Dr. Ali Ahmadi (2013, April). Impact of Economic Reform on the Expansions of Middle Classes in Southeast Asian Countries. Souther Regional Honors Conference, Louisville, KY, April.

Yen Tran and Dr. Ali Ahmadi (2013, March). Impact of Economic Reform on the Expansions of Middle Classes in Southeast Asian Countries, National Social Science Association Annual Conference, Las Vegas, NV, March.

Yen Tran and Dr. Ali Ahmadi (2013, April). Impact of Economic Reform on the Expansions of Middle Classes in Southeast Asian Countires, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

Certificate of Merit at the Celebration of Student Scholarship, Morehead State University, April.

Camden Carroll Libreary Research Award, Second Place.

Post-Graduation Plans (Seniors only):

Mr. Tran plans to attend law school to pursue double degrees, J.D. and MBA.

SCHOOL OF PUBLIC AFFAIRS

Baker, Autumn

Major:

Government

Faculty Mentor:

Michael Hail

Research/Project Title:

Roger Sherman and Federalism: The Transition from the Articles to the Constitution

Project Abstract/Summary:

This study examines the contributions by Roger Sherman on the American Founding and Federalism. The findings of this study attribute Sherman's political principles to his religiosity. The research utilized content analysis of archival documents, as well as an in depth review of literature on Federalism, Puritanism, Congregationalism, the Articles of Confederation, the 1787 Constitution, the Bill of Rights, and Roger Sherman. Findings suggest limited influence on current issues but significant, if underappreciated, influence from Roger Sherma and the associated structure of Federalism.

Project Dissemination:

Oral Presentations:

Autumn B. Baker and Dr. Michael Hail (2013, April). Roger Sherman and Federalism: The Transition from the Articles to the Constitution. Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Autumn B. Baker and Dr. Michael Hail (2013, February). Roger Sherman and Federalism: The Transition from the Articles to the Constitution, 2013 Kentucky Political Science Association Meeting, Lexington, KY, February.

Awards and/or Honors:

Abdul H. Rifai Award, Best Undergraduate Research Paper, Kentucky Political Sciences Association Meeting, February.

Post-Graduation Plans (Seniors only):

Ms. Baker has been accepted into the M.A. program in Government at Morehead State University.

Dye, Johnathon

Major:

Government

Faculty Mentor:

Jonathan Pidluzny

Research/Project Title:

Political Polarization in America: How Media Bias and the Culture War Affects Presidential Elections

Project Abstract/Summary:

Media is everywhere in the United States. In its traditional forms – television, newspapers, and news magazines – and in newer forms – political blogs and talk radio – the American media has the potential to exert a major impact on the political views of American voters. This project compiles and analyzes research on media bias in the U.S. in order to determine the extent to which media bias impacts American politics. In particular, this project, generously supported by an Undergraduate Research Fellowship, investigates the impact of media bias on Americans' voting patterns. Do stations like MSNC and Fox News really polarize the voters who watch them? And more importantly, has a biased network ever tipped the vote in a national election? The project found that most news media outlets have a pronounced media bias and the proportion of time and resources they devote to commentary (in contrast to news) is increasing. Unexpectedly, viewers tend to be attracted to, rather than unknowingly influenced by, partian media. These echo and amplification chambers fuel the culture war by radicalizing high information voters who impact election campaigns mainly by their influence over the primary process.

Project Dissemination:

Oral Presentation:

Johnathon Dye and Jonathan Pidluzny (2013, April). Political Polarization in America: How Media Bias and the Culture War Affects Presidential Elections, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Fyffe, Bradley

Major:

Government

Faculty Mentor:

William Green

Research/Project Title:

The FDA Contraceptive Marketing Approval and Products Liability Litigation: Depo-Provera and the Risk of Osteoporosis

Project Abstract/Summary:

The U.S. Food and Drug Administration has a legislative mandate to decide whether a prescription drug is safe and effective by assessing its scientific evidence and determining the acceptability of its risk. This research explores FDA's 1992 decision to approve Depo-Provera, a injectable contraceptive, the drug's 2004 FDA osteoporosis black box warning, and the drug's products liability litigation. This research has found that the FDA relied upon scientifically questionable research in approving Depo-Provera and that the drug's use has led to products liability actions by women who have claimed to suffer osteoporosis from the drug's use. Their lawsuits have not succeeded, because the manufacturer has used the FDA's drug package insert, state products liability law, the learned intermediary doctrine, and expert evidence to avoid liability.

Project Dissemination:

Oral Presentations:

Bradely S. Fyffe and William Green (2013, April). The FDA, Contraceptive Marketing Approval and Products Liability Litigation: Depo-Provera and the Risk of Osteoporosis, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

KPSA paper and Food and Drug Law Journal article, will be incorporated into Dr. Green's manuscript: The Odyssey of Depo-Provera.

Awards and/or Honors:

Bradley Fyffe is participating in the Summer 2013 Canadian Parlimentary Internship Program and will come to know Canadian politics from the inside. He is interning in the office of Carolyn Bennett, a Liberal Party Member of Parliament (MP), an M.D., who was an assistant professor in the Department of Family and Community Medicine at the University of Toronto, and Minister of State for Public Health. In her office he is answering constituency mail, assisting in writing and editing materials sent to the MP's riding (district), conducting research on policy issues and drafting speeches for Ms. Bennett.

Post-Graduation Plans (Seniors only):

N/A.

Galbreath, James

Major:

Government

Faculty Mentor:

Jonathan Pidluzny

Research/Project Title:

Breaking All the Rules: How President Obama and Congressional Democrats Reformed Healthcare Against the Odds

Project Abstract/Summary:

Aside from President Obama's Healthcare Reform Law, no piece of major social legislation has been enacted without bipartisan support over the course of the twentieth century. The Social Security Act (1935), the Civil Rights Act (1964), the Medicare Act (1965), and the Welfare Reform Act (1996) all garnered significant support from both political parties. In fact, the passage of Healthcare Reform defies almost every rule established by Douglas Arnold in his seminal work, The Logic of Congressional Action. In addition to its lack of bipartisan support, it delivers concentrated benefits to small and politically inattentive population, its significant costs diffused over a large, attentive, population. This project, supported by an Undergraduate Research Fellowship, explains how President Obama and Congressional Democrats achieved their unlikely legislative success. The project found that legislation that bestows a costly benefit upon a politically inattentive populations (eg.low-income voters) has a very small chance of passing, especially where the costs are either diffused over a broad population, or concentrated on high-information voters. This is the reason healthcare reform proposals have failed in the past. President Obama succeeded, by hiding costs from voters and otherwise shielding Congressmen who supported the PPACA from electoral retribution – in part by ensuring the most unpopular consequences are late order or difficult to trace back to the legislation, and in part by shifting costs to private insurers (which the public would have refused to bear as tax increases).

Project Dissemination:

Oral Presentation:

James Galbreath and Jonathan Pidluzny (2013, April). Breaking All the Rules: How President Obama and Congressional Democrats Reformed Healthcare Against the Odds, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Mr. Galbreath has been admitted to the Master of Public Administration Program at Morehead State University for the 2013-2014 academic year.

Hopkins, Rebecca

Major:

Government

Faculty Mentor:

William Green

Research/Project Title:

The Odyssey of Depo-Provera: Two Stories of Contraceptive Risk

Project Abstract/Summary:

Rebecca Hopkins' poster tells two stories of contraceptive drug risk which are defined by the nature of the American federal system. One is a national story of contraceptive drug testing and carcinogenic risk which traces Depo-Provera's FDA approval odyssey from Upjohn's initiation of animal and human clinical testing, to the company's submission of a New Drug Approval application in 1967 and then to the congressional and administrative scrutiny of the drug's political acceptability and scientific assessment of its risk which delayed its FDA approval until 1992. At the same time, the state-based story of the short-term side effects, including depression, unpredictable menstrual bleeding, and delay in return to fertility which traces Depo-Provera's unapproved use by family planning clinics, including the drug's largest domestic clinical trial at the Grady Memorial Hospital, and of the only products liability trial: Upjohn vs MacMurdo (1990). In sum, the poster tells a collective story of the political, scientific, legal and personal consequences of contraceptive drug risk.

Project Dissemination:

Poster Presentation:

Rebecca Hopkins and William Green (2013, April). The FDA Contraceptive Marketing Approval and Products Liability Litigation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Murphy, Cody

Major:

Government

Faculty Mentor:

Murray Bessette

Research/Project Title:

The Effect of the Lincoln Douglas Debates on Early American Political Discourse

Project Abstract/Summary:

The 1858 campaign debates between Abraham Lincoln and Senator Stephen A. Douglas were a public discussion of the most pressing issues of the day: the fundamentals of liberty, the "peculiar institution" of slavery, the nature of federal-state relations, and the true meaning of the ideals asserted in the Declaration of Independence. Using the scholarly literature, this paper traces the history of slavery in the United States, from the initial period of colonization, through the founding of the country, to the debates themselves. It then analyzes the respective positions of the two candidates, as well as the immediate effect the debates had in preparing the country for the Union's greatest crisis – the Civil War.

Project Dissemination:

Poster Presentations:

C. Murphy and M. Bessette (2013, April). The Effect of the Lincoln Douglas Debates on Early American Political Discourse, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

C. Murphy and M. Bessette (2012, May). The Effect of the Lincoln Douglas Debates on Early American Political Discourse, Morehead State University School of Public Affairs Poster Session, Morehead, KY, May.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Pfalzer, Laura

Major:

Government

Faculty Mentor:

Murray Bessette

Research/Project Title:

The Hegelian Sense of Self with Regards to Wealth in Jane Austen's Sense and Sensibility

Project Abstract/Summary:

Hegelian philosophy shows that one's freedom, even one's mere existance, is interconnected with external property. It is this connection, between the self and property, which influences societal conventions and preoccupies the individual in a relentless acquisition of wealth – even if this means sacrificing character. An examination of Jane Austen's novel Sense and Sensibility in Light of the Hegelian Sense of Property, depicts this relationship. Through the lives of Austen's characters, which are firmly entranced in a patriarchal society, we begin to see money's firm grasp on the individual, and the willingness of human beings to let material concerns overshadow those of the heart, as they try and cope in a society that does not allow for both.

Project Dissemination:

Poster Presentations:

L. Pfalzer, (2013, April). The Sense of Self with Regards to Wealth in Jane Austen's Sense and Sensibility, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

L. Pfalzer (2013, May). The Sense of Self with Regards to Wealth in Jane Austen's Sense and Sensibility, Morehead State University School of Public Affairs Poster Session, Morehead, KY, May.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Ruggiero, Ashley

Major:

Government

Faculty Mentor:

Michael Hail

Research/Project Title:

Federalism and Administrative Law: Regulatory Power and the Constitution

Project Abstract/Summary:

This research examined the Administrative Procedures Act and the affects on state authority and regulatory federalism. A database of state administrative regulations was developed and the results of administration policy analyzed. A paper presentation was made at the Kentucky Political Science Association meeting in 2013 and was nominated for an award. This study examined the changes to sovereignty for the States as the nation transitioned to a regulatory state from a period of decentralized dual federalism.

Project Dissemination:

Oral Presentations:

Ashely Ruggiero and Dr. Michael Hail (2013, April). Federalism and Administrative Law: Regulatory Power and the Constitution, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Ashley Ruggiero and Dr. Michael Hail (2013, February). Federalism and Administrative Law: Regulatory Power and the Constitution, 2013 Kentucky Political Science Association Meeting, Lexington, KY, February.

Awards and/or Honors:

Nominated for the Abdul H. Rifai Award, Best Undergraduate Research Paper, Undergraduate Student, Kentucky Political Science Association Meeting, February.

Received the Outstanding RAPP Program of Distinction Undergraduate Student 2012-13.

Post-Graduation Plans (Seniors only):

Accepted into M.A. program in Government at Morehead State University.

Skaggs, Leonidas

Major:
Government

Faculty Mentor:
Jonathan Pidluzny

Research/Project Title:
Egypt's Runaway Revolution: How Illiberal Elements of Egyptian Society Captured the Reins of Government by Democratic Means

Project Abstract/Summary:
This study chronicles the political transformation that began to unfold in Egypt at the beginning of 2011 as a result of popular uprisings, and proceeds to investigate the likely ramifications of what has come to be known as the "Arab Spring." While the revolution was initially led by young modernists intent to liberalize Egypt's government and economy, recent elections and the constitutional convention have been dominated by groups promising to use the power of the government (achieved by democratic means) to promulgate decidely illiberal policies. This project, generously funded by an Undergraduate Research Fellowship, goes on to consider the likely consequences of the revolution for Egyptians themselves, as well as for American interests in the region. The project found that the most conservative elements of Egyptian society were able to exert a profoundly illiberal impact by way of democratic elections and procedures. The Muslim Brotherhood was victorious in the parliamentary and presidential elections. With the support of the more radical Salafist parties, they were able to write a constitution that does little to protect the rights of minorities and establishes sharia (Islamic law) as the principle source of legitimate legislative authority. The executive has increased the power of the presidency and consolidated his authority over the military. Egypt's 2011 revolution is looking less and less democratic, and more and more likely to yield a new autocratic regime, through a series of free and fair elections.

Project Dissemination:

Poster Presentation:
Clay Skaggs and Jonathan Pidluzny (2013, April). Egypt's Runaway Revolution: How Illiberal Elements of Egyptian Society Captured the Reigns of Government by Democratic Means, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:
N/A

Post-Graduation Plans (Seniors only):
N/A

CAUDILL COLLEGE OF ARTS, HUMANITIES, AND SOCIAL SCIENCES

DEPARTMENT OF ART AND DESIGN

Goble, Sabrina

Major:
Art

Faculty Mentor:
Seth Green

Research/Project Title:
Ceramics Facility Management and Kiln Maintenance/Firing

Project Abstract/Summary:
This experience allowed for exploration and learning of multiple ceramics facility management skills that are necessary to have for the success of studio ceramic artists and instructors.

Specific skills explored and learned included the following: mixing studio clays, slips, and glazes; completing raw material inventories, compiling material orders, and creating proper health and safety labels for using all studio materials; loading and firing electric and gas kilns; replacing kiln elements, relays, and thermocouples.

Project Dissemination:

Poster Presentation:
Goble, S. and Green, S. (2012, April). Ceramics Facility Management and Kiln Maintenance/Firing, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:
N/A
Post-Graduation Plans (Seniors only):
Student plans to continue working in ceramics to prepare for a career as studio artist.

Harper, Megan

Major:
Biomedical Sciences
Faculty Mentor:
Joy Gritton
Research/Project Title:
Haldeman Community Center after School Program
Project Abstract/Summary:
The Haldeman Community Center after school program started in the Fall of 2012. The overall goal of this program is to offer a safe, encouraging, child-centered environment for elementary students where the students participating receive physical activity, a healthy snack, a planned learning activity, and help with homework. The research was observing the challenges the children faced along with the challenges the volunteer staff faced, what is being done to overcome these challenges, and the lessons learned.
Project Dissemination:
Oral Presentations:
Harper, Megan (2013). Haldeman Community Center after School Program, University of Kentucky Graduate Appalachian Research Community Conference.
Harper, Megan (2013). Haldeman Community Center after School Program, Appalachian Studies Association Symposium.
Harper, Megan (2013, April). Haldeman Community Center after School Program, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.
Awards and/or Honors:
N/A
Post-Graduation Plans (Seniors only):
N/A

Haymond, Julie

Major:
Communication Studies
Faculty Mentor:
Joy Gritton
Research/Project Title:
Community Art 101: Teachers Involving Their Students in Community Art Projects
Project Abstract/Summary:
Eastern Kentucky art teachers often work in relative isolation with little financial or moral support, yet communities benefit from their work in many different ways. Not only do the art teachers provide technical instruction and information about the history of art around the world through time, but they also mentor youth who are bright and talented, but may not excel in academic classes. As art teachers, they offer guidance to at-risk youth, and help them to work through personal issues and struggles through art. They also help students to find arts-related employment and places to show and sell their work. Art teachers play key roles in bringing communities together through local public arts projects and festivals. The Eastern Kentucky Art Project (EKAP) is reaching out to thses teachers to both support and honor their imporant work. The EKAP website (www.ekap.org) features ideas for projects and lesson plans relevant to Eastern Kentucky. A Facebook page has also been created so that teachers can meet and support one another over the Internet. Artwork created by students and their teachers is being posted to the website, and vidoe interviews with teachers are also being added. EKAP team members are making short, in-class presentations throughout Eastern Kentucky to create awareness about these resources and to identify other ways to foster a supportive on-line community for art teachers.

Project Dissemination:

Oral Presentations:

Haymond, J. Community Art 101: Teachers Involving Their Students in Community Art Projects, GARC Symposium, University of Kentucky, February.

Haymond, J. Community Art 101: Teachers Involving Their Students in Community Art Projects, Appalachian Studies Association Conference, Boone, NC, March.

Haymond, J. (2013, April). Community Art 101: Teachers Involving Their Students in Community Art Projects, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

To find a job, preferably in arts administration.

Madden, Tara

Major:

Art/Spanish

Faculty Mentor:

Joy Gritton

Research/Project Title:

The Significance of Landmarks in Eastern Kentucky

Project Abstract/Summary:

This project looks at major architectural landmarks in the Eastern Kentucky counties of Laurel, Whitley, and Knox, rcing the significance of these structures to their communities over time. Information gathered on these noted landmarks includes the methods by which they were constructed, the architects who designed and built them, and the different functions they have served. Comparisons are made between the structures' current appearance and their original forms, using historic and recent photos. Oral history interviews are used to document the personal meanings these landmarks hold for natives of these counties. Through these combined research methods a clearer idea of the significance of architecture in Eastern Kentucky – past and present – is revealed. This project is in association with the Eastern Kentucky Arts Project (EKAP)

Project Dissemination:

Oral Presentations:

Madden, T. (2013, February). The Significance of Landmarks in Eastern Kentucky, GARC Symposium, University of Kentucky, Lexington, KY, February.

Madden, T. (2013, March). The Significance of Landmarks in Eastern Kentucky, Appalachian Studies Association Conference, Boone, NC, March.

Madden, T., (2013, April). The Significance of Landmarks in Eastern Kentucky, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

To find a job, preferably in Arts Administrations, and to pursue a Graduate degree in Fine Art.

Peterson, Annie

Major:

Art

Faculty Mentor:

Jennifer Reis

Research/Project Title:

Arts Programming Administration: Management, Logistics, Design, and Promotion

Project Abstract/Summary:

The project involved all aspects of professional arts programming management; including exhibition logistics in the curatorial, registration, exhibition design and installation areas; special events and hospitality; art programming for educational and cultural purposes (artist lectures, workshops, forums, art sales); and marketing/public relations for all gallery programming. National and Regional Juried exhibitions for 2012/13 include one group exhibition; one national juried thematic exhibition; three student art exhibitions (high to contemporary art textile art from Kentucky and the surrounding states (Stitch+7), of which Ms. Peterson assisted in the organization of in regards to jurying. In addition, she assisted the gallery director in exhibition organization of portfolios submitted for group exhibition

opportunities for the 2013-2015 exhibition cycle, as well as be the student representative on the jurying committee. Ms. Peterson was involved in visiting artist logistics and hospitality, participated in student-focused arts activities like the Annual Halloween Costume Contest and Rocky Horror Picture Show Screening, and assisted Carly Saunders in the management and promotion of the third annual MSU-Student Craft Bizarre.

Project Dissemination:

All Events at Claypool-Young Art Gallery.

September 12 – October 11
Family Portraits: Works by Stafford Smith, Nicole McCormick Santiago, Leslie Shiels and Dale Inglett
September 12, 5 - 7 p.m. (Wednesday), Opening Reception
Visiting Artists Lectures:
Stafford Smith, photography, Friday August 31
10:20 – 11:20 a.m. & 12:40 – 1:40 p.m., CY 111
Nicole McCormick Santiago, painting, Thursday October 11
10:20 – 11:20 a.m. & 12:40 – 1:40 p.m., CY 111
October 24 – November 20
New Country: Ruralism in Contemporary Art
October 24, 5 - 7 p.m. (Wednesday), Opening Reception
Visiting Artist Lectures:
Courtney Kessel, sculpture, Tuesday November 20
10:20 – 11:20 a.m. & 12:40 – 1:40 p.m., CY 111
October 31 (Wednesday), 6 – 9 p.m.
Annual Halloween Costume Contest & Rocky Horror Picture Show
Sponsored by ALLYance, Art & Design, CCHSS
November 29 and 30 (Thursday and Friday)
3rd Annual Craft Bizarre: MSU Student Art & Craft Fair
In partnership with the Visual Arts Guild, AIGA, Ceramics Guild & Art Ed Club
January 23 – February 20
Annual MSU Art Faculty Exhibition
January 9, 9 a.m. – 4 p.m. (Wednesday/Convocation): Faculty Art Drop-Off
February 20, 5 - 7 p.m. (Wednesday), Closing Reception
February 19, 11:30 a.m.– 12:30 p.m. (Tuesday), Faculty Forum
March 6 – 13
Annual Burley-Coal Art Exhibition and Competition
Saturday, March 9, 10:00 a.m. – 4:00 p.m., HS Art Exhibition Special Hours
March 13 (Wednesday), High School Art Day
April 3 - April 10
Annual MSU Sophomore Art Exhibition
April 3, 5 - 7 p.m. (Wednesday), Opening Reception
March 26 (Tuesday), Sophomore Art Drop Off, 9 - 3
April 12 (Friday), Sophomore Reviews
April 24 – May 8
Annual MSU Senior Juried Art Exhibition
April 24, 5 - 7 p.m. (Wednesday), Opening Reception
April 16 (Tuesday), Senior Art Drop Off, 9 - 3
June 1 – August 30
7STITCH: Contemporary Textile Art from Kentucky & Surrounding States
June 1, 10 a.m. – 5 p.m. (Saturday), SDA KY Mini-Conference
June 1, 3 - 5 p.m. (Saturday), Opening Reception
5 - 7 p.m. (Wednesday), Opening Reception
Celebration of Student Scholarship, Morehead State University, Morehead, KY, April

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Saunders, Carly

Major:

Art

Faculty Mentor:

Jennifer Reis

Research/Project Title:

ArtWorks: Visual Arts Programming, Products, and Promotion in Non-Profit and For-Profit Contexts

Project Abstract/Summary:

The project involved aspects of professional arts programming management; including exhibition logistics and design; special events and hospitality; art programming for educational and cultural purposes (artist lectures, workshops, forums, art sales); and marketing/public relations for all gallery programming. National and Regional Juried exhibitions for 2012/13 include one group exhibition; one nationally juried thematic exhibition; three student art exhibitions (high school, MSU sophomore, MSU senior); the annual faculty exhibition; and a large summer exhibition specific to contemporary textile art from Kentucky and surrounding states. Ms. Saunders was involved in visiting artist logistics and hospitality associated with the fall exhibitions, will be involved in planning and organization of student-focused arts activities like the annual Halloween Costume Contest and Rocky Horror Picture Show Screening, and was the student manager of the third annual MSU-student Craft Bizarre. She will also accompany Ms. Reis on regional and out-of-state arts programming/installations as per needed, and assist with art programming as the need arises.

Project Dissemination:

All Events at Claypool-Young Art Gallery

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June 1 – August 30
7STITCH: Contemporary Textile Art from Kentucky & Surrounding States
June 1, 10 a.m. – 5 p.m. (Saturday), SDA KY Mini-Conference
June 1, 3 - 5 p.m. (Saturday), Opening Reception

Awards and/or Honors:

Merit Award, Presentation, MSU Celebration of Student Scholarship

Post-Graduation Plans (Seniors only):

N/A

Sloas, Meggan

Major:

Art Education

Faculty Mentor:

Joy Gritton

Research/Project Title:

Haldeman Community Center After-School Enrichment Program

Project Abstract/Summary:

This project represents a collaboration between the Eastern Kentucky Arts Project (coordinated by Joy Gritton) and the Haldeman Community Center (project coordinator is RoseMary Johnson).

The goal of this program is to offer a safe, child-centered, nurturing after school enrichment program for elementary students Monday through Thursday during the months of March and April at the Haldeman Community Center. Participating children enjoy physical activities, a nutritious snack, a planned learning activity, and help with their homework and tutoring (with reading being a primary focus). Attendance averages 15 students per day. Special offerings include theatre (led by Octavia Fleck), art (coordinated by Jean Petsch), and music (coordinated by Sue Creasap and the Kentucky Center for Traditional Music). MSU education and Honors students assist with a range of activities.

The Haldeman Community Center's mission is to provide a place for those in the community to meet for fellowship, to provide children with a safe haven away from drugs, to foster the dramatic and musical arts, by providing a place for their practice and performance and to help sustain and enhance the year-round economic, educational, recreational and social well being of the community's residents. They are located at 4399 Open Fork Road.

EKAP's mission is to serve educators, students, artists, community planners, and other interested individuals working to strengthen Eastern Kentucky communities through the arts. EKAP also assists in identifying service-learning venues for students seeking to support this mission. EKAP has received staffing support from MSU through the Undergraduate Research Fellowship and Regional Engagement Fellowship programs.

Project Dissemination:

Oral Presentations:

Meggan Sloas, Megan Harper, and Dr. Joy Gritton. (2013). The Haldeman, Kentucky Oral History and After School Program Projects, Annual GARC Conference, University of Kentucky, Lexington, KY.

Meggan Sloas, Megan Harper, and Dr. Joy Gritton. (2013). The Haldeman, Kentucky Oral History and After School Program Projects, Annual Appalachian Studies Association Conference, Appalachian State University, Boone, NC.

Meggan Sloas, and Dr. Joy Gritton. (2013, April). The Haldeman Community Center: Rebuilding the Community, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Slover, Caitlin

Major:

Art Education

Faculty Mentor:

Seth Green

Research/Project Title:

Appalachian Ceramic Student Outreach Program

Project Abstract/Summary:

This project supported local and regional school art programs that have suffered budget cuts inhibiting teachers to offer ample art instruction and travel opportunities for students to receive outside instruction. The ultimate goal of the project was to establish partnerships with regional P-12 art teachers, reach out to art students, and broaden opportunities for students to learn about ceramic art. This project was supported by Morehead State University's Center for Regional Engagement in the form of a Student Regional Engagement Fellowship.

Project Dissemination:

Poster Presentation:

Slover, C. and Green, S. (2013, April). Appalachian Ceramic Student Outreach Program, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

To apply for the MA program in Art Education at MSU.

Staggs, Kara

Major:

Art

Faculty Mentor:

Joy Gritton

Research/Project Title:

Young Artists of Harlan County: Overcoming Stereotypes

Project Abstract/Summary:

This presentation is drawn from a series of short interviews with both young and mature artists from Harlan County, Kentucky. Topics addressed include how each artist feels about their work in relation to the region, the stereotyping of Appalachian art, and any discouragement that young artists might feel while attempting to break the mold of a cultural mindset and artistic style. These inter-generational oral histories reveal how these sentiments have changed over time. My research also included examining Harlan's unique arts programming. These included the Higher Ground Theatre and Performing Arts group as well as Captain Crawdad's Social Experiment, a local arts festival that showcases local music, literature, and visual arts from all styles and genres. This project is a Undergraduate Research Fellowship supported by Morehead State University.

Project Dissemination:

Staggs, K. and Gritton, Joy (2013, April). Young Artists of Harlan County: Overcoming Stereotypes, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Presented at GARC.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

DEPARTMENT OF COMMUNICATIONS, MEDIA, AND LEADERSHIP STUDIES

Beckelheimer, Sarah

Major:

Communications

Faculty Mentor:

John Modaff

Research/Project Title:

Gender and Politics in News Media Language

Project Abstract/Summary:

The purpose of this study was to examine the representations of gender through word usage and story coverage by the news and related media concerning political events. The research for this study was done in the form of content analysis of political news coverage over the decade 2002 through 2012.

Project Dissemination:

None pending. Student encouraged to submit to Southern States Communication Association 2013 in Louisville or the following year. Ms. Beckelheimer has entered MSU Communication Master of Arts Program.

Awards and/or Honors:
N/A
Post-Graduation Plans (Seniors only):
Currently enrolled for MA in Communication at Morehead State University and working in journalism field.

Breeding, John

Major:
Communications
Faculty Mentor:
Steve Middleton
Research/Project Title:
Bluegrass Paranormal: A Documentary Investigating Paranormal Investigators in Kentucky
Project Abstract/Summary:
The purpose of this documentary was to document the ever growing group of paranormal investigators in Kentucky. The documentary focused on the obscure investigators and the questionable investigation data they present. Showing the business as a mix between circus and physics.
Project Dissemination:
None Pending. Student submitted project to online film festivals and also Kentucky Educational Television.
Awards and/or Honors:
N/A
Post-Graduation Plans (Seniors only):
Attempting to gain employment in the field of videography, and television production.

Hammond, Pamela

Major:
Multimedia Production
Faculty Mentor:
Jeffrey Hill
Research/Project Title:
Creating a TV Series for KET: Pre-Production, Production, and Post-Production
Project Abstract/Summary:
When you watch a TV show, you imagine that people just had to set up cameras and shoot it. In actuality, the majority of the work of creating TV is done before and after the shooting. This behind the scenes look explains what it took to create “How Hollywood Does It,” 12 half-hour shows on film history and techniques currently airing on KET. This studio production needed film clips to be captured from dozens of films; lighting and sets to be designed; scripts and film clips to be closed-captioned; scripts to be written; shooting to be rehearsed; multiple shots to be edited; and graphics to be designed. This research was supported by an MSU Undergraduate Research Fellowship and a grant from the Kentucky Humanities Council.
Project Dissemination:
Oral Presentation:
Hammond, P. Shay, and Hill, Jeffrey (2013, April). Creating a TV Series for KET: Pre-Production, Production, and Post-Production, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.
All twelve shows in the series “How Hollywood Does It,” were completed in January of 2013. They have aired twice on KET (the PBS affiliate for Kentucky) since January 2013 and are currently scheduled to air three more times through September of 2013.
Awards and/or Honors:
Awarded Certificate of Merit and best oral presentation of the CCAHSS during the 2013 MSU Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.
Post-Graduation Plans (Seniors only):
N/A

Webb, Hannah

Major:
Communications

Faculty Mentor:
Randy L. Manis

Research/Project Title:
Best Practices in Student-Run Collegiate Public Relations Firms

Project Abstract/Summary:
The primary focus of this research project was exploring "best practices" for student-run public relations firms on college campuses. To build a foundation for this project, the researchers examined information regarding all aspects of student-run public relations firms starting with guiding documents from the Public Relations Student Society of America. Additional research included contacting PRSSA-affiliated student-run agencies. ¼ of PRSSA's Nationally-Affiliated student-run firms were surveyed to identify benefits and challenges to integrating such a firm into the MSU PRSSA chapter. Results were compiled and presented to the faculty within the Department of Communications, Media, and Leadership Studies. Data gathered indicated that 50% of firms receive their necessary funding from clients with the majority (38%) of firms reporting an investment over $1,000 into the firm annually.

Project Dissemination:

Poster Presentations:
Webb, Hannah, Farhat, Caitlin, and Manis, Randy L. (2013, April). Best Practices in Student-run Collegiate Public Relations Firms, Department of Communications, Media and Leadership Studies, Morehead State University, Morehead, KY, April.

Webb, Hannah, Farhat, Caitlin, and Manis, Randy L. (2013, April). Best Practices in Student-run Collegiate Public Relations Firms, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:
Certificate of Merit, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Post-Graduation Plans (Seniors only):
N/A

DEPARTMENT OF ENGLISH

Caldwell, Ben

Major:
English

Faculty Mentor:
Glen Colburn

Research/Project Title:
Happiness and Modernity

Project Abstract/Summary:
A study of the evolution in concepts and pursuits of happiness in Western culture, with emphasis on the seventeenth- and eighteenth-century paradigm shift in Britain and America marking the emergence of a particularly modern conception of happiness. The study begins with a hypothesis that "the pursuit of happiness" and the psychologizing of happiness are defining traits of modernity.

Project Dissemination:

Oral Presentations:
Caldwell, Ben (2013, February). Happiness in the Eyes of Samuel Johnson, Kentucky Honors Roundtable, Lexington, KY, February.

Caldwell, Ben (2013, April). Before "The Pursuit of Happiness:' Happiness to Locke, Johnson, and Rousseau," Southern Regional Honors Conference, Louisville, KY, April.

Caldwell, Ben and Dr. Glen Colburn (2013, April). "Before 'The Pursuit of Happiness:' Happiness to Locke, Johnson, and Rousseau," Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:
N/A

Post-Graduation Plans (Seniors only):
N/A

Ison, Morgan Marie

Major:

English

Faculty Mentor:

Kathryn Mincey

Research/Project Title:

Exploring Curriculum Alignment and Instructional Support for Kentucky English Teachers in Literature and Grammar: Interpretation and Dissemination of Research

Project Abstract/Summary:

The project achieved five goals. It:

- Continued to interpret and update data collected from the survey of Kentucky high school English teachers
- Provided research-based professional development opportunities for area English teachers
- Inventoried materials in the English Education Center (402 Combs Building) to determine gaps in instructional support materials (based on the survey)
- Shaped the research and related projects toward the new Common Core State Standards
- Explored grant opportunities to acquire instructional support materials for texts commonly taught in Kentucky High Schools
- Continued to develop a web page presenting the results of the project at http://www.morehead-st.edu/eec/index.aspx?id=27486

Project Dissemination:

Oral Presentation:

Ison, Megan M. and Kathryn Mincey (2013, February). Exploring Curriculum Alignment and Instructional Support for Kentucky English Teachers in Literature and Grammar: Interpretation and Dissemination of Research, the Kentucky Council for Teachers of English Conference, Covington, KY.

Poster Presentation:

Ison, Megan M. and Kathryn Mincey (2013, April). Exploring Literature Curriculum Alignment and Instructional Support for Kentucky English Teachers: Statewide Survey Results, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

Certificate of Merit, Undergraduate Research Poster Contest, Caudill College of Arts, Humanities, and Social Sciences, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Post-Graduation Plans (Seniors only):

N/A

Jones, Whitney

Major:

Secondary English Education

Faculty Mentor:

Deanna Mascle

Research/Project Title:

The Impact of Writing Studio on the Self-Efficacy of Developing Writers and Developing Teachers

Project Abstract/Summary:

Despite a dozen years of formal writing instruction, many students continue to struggle with writing when they enter college. These struggles are often the result of the student's belief that s/he is not and cannot become a writer. This lack of confidence negatively affects student motivation and performance which can have a severe impact on student success in college and beyond. We are conducting a participatory research project to study the impact of our Writing Studio program on this cycle of writing failure.

During our pilot year we discovered that the MWP Writing Studio had a tremendous impact on the development of struggling writers. The writers we worked with reported increases in confidence and competence as well as improved attitudes toward writing. Instructors reported similar results as well as improvements in class discussion and engagement. We would like to continue to study the effectiveness of this method of writing support by working with students of instructors not trained in National Writing Project methods to determine if this effect is diminished or maintained at the same levels.

In addition, we found that our Peer Writers grew in confidence and competence as writing teachers over the course of the year and we would like to study this in more depth as we know that teacher self-efficacy is strongly linked to student self-efficacy.

Studio Model: We are an embedded tutor program supported by a learning community. Our Peer Writers work with small groups of developmental writing students to provide guidance and support tailored to the needs of the group. The Peer Writers, the class instructors, and MWP Site Leaders work together as a learning community to support the work of the writing groups and the Peer. Unlike a writing center or traditional tutoring program, which focuses on a specific assignment during one session, writing studio groups focus on the writer as a whole using student assignments as only one of many tools and work together over time to help the group members become self-regulating.

The student is one of five English Education students recruited to work with Dr. Mascle on this project as it is too large to undertake with only one student. Each student will lead a studio group and keep a reflection journal as well as participate in focus group sessions.

Project Dissemination:

Poster Presentation:

Alex Reinke, Whitney Jones, Julie Rehkamp and Deanna Mascle. (2012, April). The Peer Writers, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Exhibitions:

The Eastern Kentucky Writing Conference, October.

The Kentucky Conference for Teachers of English, February.

We are engaged in an important service learning project which contributes to the success of two at-risk MSU student populations. Developmental students face low levels of retention and success. In addition, Early College Students may face problems transitioning to college as sophomores without the actual campus experience but our Peer Writers make these students aware of college expectations and realities.

In addition, this is a tremendous experience for our Peer Writers who plan to be teachers within the next few years. They learn about the unique challenges and struggles that students in our region face as well as develop skills and resources that they can use in their own classrooms one day. Also, they are given entry to one of the most powerful professional development models in existence – the National Writing Project.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

To teach high school English in Kentucky.

Sullivan, Spencer

Major:

English

Faculty Mentor:

Layne Neeper

Research/Project Title:

Edgar Allan Poe's Pym and Representations of the "Natural"

Project Abstract/Summary:

Edgar Allan Poe's only novel, The Narrative of Arthur Gordon Pym of Nantucket, concerns itself greatly with "nature" and "the natural," and what is and is not natural in the world. More importantly, this novel addresses Poe's views on the natural state of human psychology and sociology. What he describes is somewhat disturbing. Psychologically, he seems to acknowledge that humans are governed "naturally" by a self-destructive and thantoptic spirit of persersity. Sociologically, racial difference between whites and blacks "naturally" results in bloody antagonism, and the only "natural" response of well-meaning whites to the black Other is suspicion, controll, and violent confrontation. This project will focus on Poe's views on the "natural" being represented from a psychological and sociological standpoint.

Project Dissemination:

Oral Presentation:

Spencer Sullivan and Layne Neeper (2013, April). Edgar Allan Poe's Pym and Representations of the "Natural," Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Whisman, Benjamin

Major:
English

Faculty Mentor:
Thomas S. Williams

Research/Project Title:
The Art of the Book Review in the Digital Era

Project Abstract/Summary:
With the overwhelming amount of books published in the United States each year, it's easy for lesser known but equally as talented writers to be neglected in the dwindling number of publications that still review books. The American Book Review focuses on books released by small, regional, university, ethnic, avant-garde, and women's presses – ones that could be easily neglected. My involvement with ABR, led by associate editor Dr. Tom Williams, included reading galley copies of upcoming or recently released small press books. After reading these books I would collaborate with Dr. Williams on locating suitable authors and assigning them appropriate books for review. When the reviews came in I would edit them, working in tandem with Dr. Williams and on my own to solve problems with style, formatting, and focus. My time with ABR immersed me in a community of people passionate about writing and reading. My work with Dr. Williams and ABR was a notable and hands-on introduction to the different aspects of the world of book reviewing, editing, and publishing. This experience has energized and encouraged my journey as a writer.

Project Dissemination:

Oral Presentation:
Whisman, Ben and Williams, Thomas S. (2013, April). The Art of the Book Review in the Digital Era, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:
N/A

Post-Graduation Plans (Seniors only):
N/A

DEPARTMENT OF HISTORY, PHILOSOPHY, RELIGION, AND LEGAL STUDIES

Cagle, Nikki

Major:
History/Sociology

Faculty Mentor:
Kristina DuRocher

Research/Project Title:
Evolution of the Hoochie Coochie Show from 1893 to the Modern Sex Industry

Project Abstract/Summary:
The Hoochie Coochie dance debuted in the United States at the Chicago World's Fair in 1893. Performed in the exhibit "A Streed in Cairo," Little Egypt gyrated her way into the hearts and pocketbooks of the white male audience. What started as a seductive belly-dance showcasing the "best" of what Egypt had to offer, later transformed into live strip and sex shows held regularly at rural carnivals and fairs through the 1970's. The "hoochie coochie girls" were idolized by young and old men alike, with many spending a half-day's wages to see a short thirty minute performance. Hoochie Coochie shows often became the highlight of male youth and their transition into the world of adult sexuality. As the occurrence of carnival strip shows declined, the modern sex industry exploded with video pornography, gentlemen's clubs, and peep show booths.

Although both the occurrence carnival strippers and the modern sex industry have been moderately documented by research such as Robert Allen's Horrible Prettiness and Wendy Chapkis' Live Sex Acts, there is little analysis of how carnival sex shows helped influence, or inspire the modern sex industry. Additionally it is important to draw parallels between the similar roles that carnival sex shows held in former society and modern sex work hold within modern society. Further exploration in this field allows for a long view of our culture's fascination with the sex industry and provides an understanding of how our culture propagates masculine, feminine, and sexual norms.

Project Dissemination:

Poster Presentations:

Cagle, Nikki and DuRocher, Kristina (2013, February). Evolution of the Hoochie Coochie Show from 1893 to the Modern Sex Industry, Posters-at-the-Capitol, Frankfort, KY, February.

Cagle, Nikki and DuRocher, Kristina (2013, April). Evolution of the Hoochie Coochie Show from 1893 to the Modern Sex Industry, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Nikki has also presented her historical research, framed with sociological theories about masculinity, performance, and sexuality, at two conferences. One, The National Meeting of the Popular Culture Association in March in Washington, DC, and the other at the Regional History Honors Conference Meeting of Phi Alpha Theta.

Awards and/or Honors:

Greg Goldy Memorial Award for Civic Action, 2013.

At the Morehead State University Celebration of Student Scholarship, Nikki won an award of Extraordinary Merit, and Award of Merit, and the "People's Choice" award for innovation and presenttion.

The PCA undergraduate acceptance rate was less than 50%, so more than half those who applied were rejected.

Post-Graduation Plans (Seniors only):

Student plans to stay at MSU and continue her work. She will try to publish some of her work, most notably by submitting to the new Porn Studies peer reviewed journal.

Goble, Josh

Major:

Philosophy

Faculty Mentor:

Wendell O'Brien

Research/Project Title:

Profile of the Redeemer

Project Abstract/Summary:

Josh engaged in intense study of the attempts of thinkers like Nietzsche and (especially) Tolstoy to figure out what Jesus Christ was really like – the "psychology of the redeemer." I (Dr. O'Brien) know that Josh worked long and hard on the project and became extremely engrossed in his work. I was very impressed. Josh gave an excellent presentation of his research entitled Who was "Jesus of Nazareth and what did he teach?" Josh himself described his project in the following terms:

"Most Westerners, religious or not, are familiar with Jesus. Whether or not he is the Son of God is a matter of Theology and will not be included in this research project, since it is concerned with philosophy. The thesis then is this: Roughly 2000 years ago a man named Jesus taught throughout the Middle East. His teachings dramatically changed the world and played a large role in shaping Western culture as it exists in the present. The aim of this research project is to identify what Jesus' taught and why the message was so effective through analysis of the Gospels and the works of various philosophers such as Friedrich Nietzsche and Leo Tolstoy. This Undergraduate Research Fellowship is being conducted through the Honors Program."

Near the end of the Spring 2013 semester, Josh submitted to me an excellent draft of a paper, rather long (15 pages or so) full of arguments and interesting tentative conclusions. He hopes to continue the project – he is in its grip – as an Undergraduate Fellow in the Spring 2014 semester.

I myself (Dr. O'Brien) believe the final result will be a fascinating paper published, or at least publishable, in a very good student philosophy journal, or even in a professional religion or philosophy journal in which professors nationwide publish their work.

Project Dissemination:

Poster Presentation:

Goble, Josh (2013, April). Profile of the Redeemer. Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Messer, Katherine

Major:

History

Faculty Mentor:

John Ernst

Research/Project Title:

Bless This Stone, This Rock: Kentuckians and the Vietnam War

Project Abstract/Summary:

Ms. Messer listened to a number of oral history interviews on Kentuckians and the Vietnam War. She created a topic index based on the interviews. In addition, she provided a brief synopsis of the topics. She also conducted newspaper and archival research.

Project Dissemination:

Poster Presentation:

Messer, Katherine and Ernst, John. (2013, April). War Comes to Campus, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Parker, Rebecca

Major:

History/Art Administration

Faculty Mentor:

Kristina DuRocher

Research/Project Title:

A Gendered Legacy: The Influence of the Burning Times on the Salem Witch Trials

Project Abstract/Summary:

In reference to the cause of the Salem Witch Trials, where New England settlers imposed traditional English constructs in the fluid environment, few historians acknowledge the parallel conditions of the Burning Times, which occurred during the early modern period in Europe, in response to political instability, social transformation, religious reform, and economic development. An estimated fifty thousand to one hundred thousand people were executed, and the victims were primarily older and widowed, female, or socially estranged. The Salem Witch Trials were a continuation of the social control mechanisms employed during the Burning Times, because they centered on eliminating the autonomy of women and the poor through the codification of witchcraft, defining feminity to discourage challenges to the positions of power reserved for elite men.

Project Dissemination:

Oral Presentations:

Parker, Rebecca and DuRocher, Kristina. (2013, February). A Gendered Legacy: The Influence of the Burning Times on the Salem Witch Trials, Posters-at-the-Capitol, Frankfort, KY, February.

Parker, Rebecca and DuRocher, Kristina. (2013, March). A Gendered Legacy: The Influence of the Burning Times on the Salem Witch Trials, National Meeting of the Popular Culture Association, Washington, DC, March.

Parker, Rebecca and DuRocher, Kristina. (2013, April). A Gendered Legacy: The Influence of the Burning Times on the Salem Witch Trials, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

Ms. Parker was named the Outstanding student in the Department of History, Philosophy, Relition, and Legal Studies for 2013.

Ms. Parker was given the Victor Howard Memorial Award for outstanding research paper in History, 2013.

The PCA undergraduate acceptance rate was less than 50%, so more than half those who applied were rejected.

Edwa P. and Allie W. Young Memorial Award for 2012.

Post-Graduation Plans (Seniors only):

Ms. Parker is under consideration for several prestigious internships, including one in European Art at the Cincinnati Art Museum and the Kentucky Historical Society. Becca desires to pursue a career in public history and these internships will give her the hands on experience she needs to pursue a master's degree in public history, for which she will apply in the fall.

Roberts, Paula

Major:
Paralegal Studies

Faculty Mentor:
Kelly Collinsworth

Research/Project Title:
Breaking Up is hard to do: Helping Low-income Families through the Pro Se Divorce Clinic

Project Abstract/Summary:
With the cost of an uncontested divorce being as much or more as one's monthly income, many low-income Kentuckians are unable to sever relationships with their estranged spouses. The Pro Se Divorce Clinic allows couples in Northeastern Kentucky to file for divorce, pro se, when they would otherwise not have the resources to hire an attorney. Originally operated by Legal Aid for the Bluegrass, the clinic provides participants the ability to complete the necessary paperwork and present the paperwork to the Circuit Judge for a dissolution of marriage. After funding cuts last year required Legal Aid to cease the program. Legal Studies students and faculty agreed to continue the coordination and supervision of the program. The program helps on average of 10-15 couples a month.

Project Dissemination:

Poster Presentation:
Roberts, Paula and Collinsworth, Kelly. (2013, April). Breaking Up is Hard to Do: Helping Low-income Families through the Pro Se Divorce Clinic, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:
Ms. Roberts received a poster award for the Caudill College of Arts, Humanities, and Social Sciences.

Post-Graduation Plans (Seniors only):
N/A

DEPARTMENT OF INTERNATIONAL AND INTERDISCIPLINARY STUDIES

Burton, Kayla

Major:
English

Faculty Mentor:
Philip Krummrich

Research/Project Title:
The Nightingale as Theme, Image, and Real Bird in the Western Tradition

Project Abstract/Summary:
We continued research in several areas related to the overall theme. Ms. Burton submitted a revised version of a conference paper she presented last year on the Philomela theme in Alice Walker's novel "The Color Purple;" we are waiting to hear whether it has been accepted for publication. She made presentations on Coleridge's poem "The Nightingale" at the annual meeting of the Kentucky Philogical Association in March 2013, the Regional Honors Conference in Louisville in April, and the Celebration of Student Scholarship. I expect to submit a book proposal based on our research.

Project Dissemination:

Oral Presentations:
Burton, Kayla (2013, April). Yet Let Us Think: Conscious Disassociation in Samuel Taylor Coleridge's "Nightingale: A Conversation Poem," Southern Regional Honors Conference, Louisville, KY, April.

Burton, Kayla (2013, April). Politics in "The Nightingale," Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Burton, Kayla (2013, March). Yet Let Us Think: Conscious Disassociation in Samuel Taylor Coleridge's "Nightingale: A Conversation Poem. Kentucky Philogical Association, Danville, KY, March.

Awards and/or Honors:
Ms. Burton's presentation at the meeting of the Kentucky Philological Association was chosen as best in section, making it eligible for publication in the association's journal; the final decision has not yet been made.

Post-Graduation Plans (Seniors only):
Ms. Burton has been accepted into the M.A. program in English at North Carolina State University.

Johnson, Lanora

Major:

Government and Sociology

Faculty Mentor:

James Masterson

Research/Project Title:

Globalization and Human Rights in China

Project Abstract/Summary:

Led by the reforms in the Post-Mao Era, China's opening to FDI and international trade has led to remarkable economic growth. Along with increased economic prowess, China has taken a larger role in international law and has been involved in the international dialogue on human rights since the 1980's, joining four Geneva humanitarian conventions and several human rights treaties by the United Nations General Assembly, as well as recognizing several human rights in their 1982 Constitution. Our research focuses on changes in China's human rights practices in comparison with changes in levels of foreign direct investment and foreign trade in China. Despite China's increased global economic integration, empowerment rights enjoyed by Chinese citizens have declined while respect for physical integrity rights has fluctuated.

Project Dissemination:

Poster Presentation:

Johnson, Lanora N. and Masterson, J. (2013, February). Globalization and Human Rights in China, Posers-at-the-Capitol, Frankfort, KY, February.

Oral Presentations:

Johnson, Lanora N. and Masterson, J. (2013, January). Globalization and Human Rights in China, Southeastern Conference for the Association of Asian Studies, Wilmington, NC, January.

Johnson, Lanora and Masterson, J. (2013, April). Globalization and Human Rights in China, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Murphy, Cassondra

Major:

Spanish/International and Interdisciplinary Studies

Faculty Mentor:

James Masterson

Research/Project Title:

Social Media in China

Project Abstract/Summary:

Widespread use of social media in China is a double edged sword: social media offers opportunities for the government to connect with society, guage the opinion of citizens in the public domain and allow citizens to voice their anger when necessary by blowing off steam online rather than in the streets (Magistad, 2012). However, social media also allows citizens to access information outside of China much more rapidly and efficiently and to link up and communicate with other citizens much more quickly. Social media allows users to share texts, photos, and files, making it much more difficult for the government to control information and to thwart organizing for political purposes. In some instances the use of social media has forced the Chinese government to take actions that it otherwise would not have done or to reverse actions or policies already set in place. The goal of this chapter is to illustrate the double-edged sword that social media poses to government officials in China, particularly high level party officials in Beijing.

Mrs. Murphy assisted in valuable qualitative data collection and summarization that greatly contributed to the completion of a manuscript submitted for publication in an edited volume.

Project Dissemination:

Data from the work of Mrs. Murphy was used in a manuscript submitted for publication in the edited volume Revolutionizing the Interaction between State and Citizens through Digital Communications, edited by Sam Edwards and Diogo Santos.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Mrs. Murphy secured a position to assist English-Language learners in being successful in school.

Nae, Oana

Major:

Strategic Communications

Faculty Mentor:

Jason Holcomb

Research/Project Title:

Romanian Nonimmigrant Labor in the United States

Project Abstract/Summary:

This research was an effort to expand a larger project involving foreign labor used in custom grain and forage harvesting in the United States. Due to a shortage of domestic labor, custom harvesters in Great Plains states have been using foreign labor through the federal government's H-2A and J-1 visa programs. Romania is one of many European source countries, but little is known about these foreign workers. In 2011 Romania supplied 167 H-2A seasonal agricultural workers to U.S. employers, but the number that worked for custom harvesters is unknown. In an attempt to collect information about Romania H-2A and J-1 visa workers, Ms. Nae translated an existing questionnaire from English to Romanian, and we then emailed two former Romanian workers known by Dr. Holcomb and requested that they complete the questionnaire on a website that hosts such surveys. One of the Romanians accessed the questionnaire but did not complete it. Dr. Holcomb also sent emails translated by Ms. Nae to researchers at the Timisoara Centre for Migration and Mobility Studies in Timisoara, Romania requesting information about Romanian H-2A and J-1 visa workers, but did not receive any responses. Dr. Holcomb plans to call them by phone in the future and found helpful migration reports on the organization's website. This literature reported details of recent emigration of Romanians to European Union member countries in Western Europe. Dr. Holcomb also phoned the Non-immigrant Visa Chief at the United States embassy in Bucharest, Romania and spoke with him about his knowledge of Romanians working in the United States with H-2A and J-1 visas. He reported that Romania does not allow use of the J-1 visa for custom harvesting, but had recently approved dozens of people for H-2A visas for the purpose of custom harvesting and suggested that some Romanians may learn about this work at Manpower, a multinational private employment agency. He said that higher unemployment and general poorer economic conditions are the main push factor involved. Finally, he reported that most H-2A visa workers from Romania do not work in Romania after returning from the U.S., most return to the U.S. many times to do the same work, and most probably learn of the work by word of mouth from past workers. With the questionnaires now set up in the Romanian and English languages Dr. Holcomb plans to continue recruiting Romanian workers to complete the questionnaire by contacting more custom harvesting employers and publishing requests for participants in the U.S. Custom Harvesters, Inc. monthly newsletter.

Project Dissemination:

Oral Presentations:

Nae, Oana and Jason Holcomb. (2013, April). Romanian Nonimmigrant Labor in the United States, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Dr. Holcomb submitted an overview of the project to the Rural Geography Specialty Group of the Association of American Geographers, which published it in its Spring 2013 issue of Rural Geography News: Newsletter of the Rural Geography Specialty Group.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Payne, Amy

Major:

Business Management

Faculty Mentor:

Philip Krummrich

Research/Project Title:

Much More Than a Residence Hall: Morehead State University Honors House

Project Abstract/Summary:

The contributors of this project – six honors students – combined their expertise to write a chapter on the Morehead State University Honors House that will appear in an upcoming monograph discussing honors housing. The purpose, history, floor plans, and usage of the house were focused upon in the article with accompanying photos and drawings.

Project Dissemination:

This project generated a presentation on group work at the spring 2013 Honors Roundtable held at the University of Kentucky, and a presentation discussing the Honors House was held at the Celebration of Student Scholarship on April 24, 2013. The article will be published in an upcoming monograph discussing honors housing.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

DEPARTMENT OF MUSIC, THEATRE, AND DANCE

Dixon, Adam

Major:

Music Education

Faculty Mentor:

William Mann

Research/Project Title:

Shortening the Throw

Project Abstract/Summary:

Since the development of the Axial Flow Valve, it has become a common valve that can be found in every major ensemble worldwide. As agreed upon by many trombonists who utilize this valve, the most common drawback is the long throw, the distance the valve lever needs to travel, requied to engage the valve. The research and development of this project will produce a solution for this drawback and will enhance the Axial Flow valve for trombonists worldwide.

Project Dissemination:

Poster Presentation:

The result is a poster presentation with a picture of the prototype on it. My project proved to be successful; however, due to the damage that occurred during the prototype fitting, I could not produce a finished project. This has, however, allowed me to gather enough data to consult a professional on instrument design and repairs to help me manufacture a final marketable product. As soon as I do this, I will be able to patent, manufacture, and market the final product to trombonists around the world.

Awards and/or Honors:

Certificate of Merit

Post-Graduation Plans (Seniors only):

N/A

Felice, Maria

Major:

Music Education

Faculty Mentor:

Lori Baruth

Research/Project Title:

A Study of Mozart's "Trio for Clarinet, Viola, and Piano in Eb Major," K. 488 from a Clarinetist's Perspective

Project Abstract/Summary:

This project focused on the Mozart Trio for Clarinet, Viola, and Piano, K. 488, from the perspective of a clarinet student. In this study, I have done two things: studied and played the clarinet part of the trio and examine what it means to me as the clarinet performer and study how the role of each instrument with the others in the melodies and harmonies of the price. With my mentor' help, I have played through the challenging clarinet part of the piece to improve my own knowledge of the clarinet part. Through the knowledge of the clarinet part, I have examined all three parts together and observed how each part plays upon the other to create the melodies and harmonies laced throughout the piece. Having only mostly studied solos and band music, the trio has given me a different perspective on clarinet playing than I have had before. I feel like I have gained knowledge of the classical studies of clarinet that will help me pursue my dreams of being the best clarinet player I can be.

Project Dissemination:

Oral Presentation:

Felice, Maria and Baruth, Lori. (2013, April). A Study of Mozart's "Trio for Clarinet, Viola, and Piano in Eb Major," K. 488 from a Clarinetist's Perspective, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

This presentation and project received a Merit Award during the Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Post-Graduation Plans (Seniors only):

N/A

Sarda, Johanna

Major:

Music

Faculty Mentor:

Roosevelt Escalante

Research/Project Title:

Jazz Vocal Styles and Techniques: A Study in Vocal Jazz and a Technique Comparison with Classical Vocal Music

Project Abstract/Summary:

Johanna created a log of jazz vocalists, recordings, bios, and a vocal analyzation for each artist. The vocal analyzation consist of traditional techniques, extended techniques, and stylistic traits. Through a comparison of jazz vocal techniques and the study of traditionally vocal techniques, she successfully reconciled conflicts between the two schools of thought. Additionally, Johanna learned to perform jazz in an authentic way as well as present jazz vocal concepts in a manner consistant with vocal pedagogues.

Project Dissemination:

Oral Presentation:

Ms. Sarda will give oral presentations and a performance at Universidade do Estado de Santa Catarine in Florianopolis, Brazil.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Ms. Sarda plans to return to Brazil and is planning on finishing her Music Education degree. Being that she already has earned a law degree, she aspired to use both music and law in the entertainment field.

Spivey, Chris

Major:

Music Education

Faculty Mentor:

Richard Miles

Research/Project Title:

Advanced Pedagogical Resources for Instrumental Instruction

Project Abstract/Summary:

The purpose of this research is to provide a culmination of resources for the Marching Arts. It will cover four components that are important factors in developing a strong curriculum for the fundamentals of the Marching Band. In addition to the compilation of resources, a video program will accompany this text as a visual aid for the education of the physical aspects of the Marching Band Fundamentals. These fundamentals are based on the Corps Style Marching, by esteemed experts of the past 40 years.

This resource is mainly a compilation of information, resources, and guides for educating one's self on Marching Band and educating their students. It is information that longstanding professionals and experts in the field have published and is the basis of what the Marching Band is today.

Project Dissemination:

Poster Presentation:

Spivey, Chris and Miles, Richard. (2013, April). Advanced Pedagogical Resources for Instrumental Instruction, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April

Awards and/or Honors:
N/A
Post-Graduation Plans (Seniors only):
N/A

DEPARTMENT OF SOCIOLOGY, SOCIAL WORK, AND CRIMINOLOGY

Jacque, Demi

Major:
Criminology
Faculty Mentor:
Elizabeth Perkins
Research/Project Title:
The Casual Links in Incarceration of Males and Females in the United States
Project Abstract/Summary:
There is a very high rate of incarceration in the United States. This study will explore similarities and differences between men and women in prison today by surveying both populations. The survey will address issues such as a history of abuse, substance use, mental illness, recidivism, social class and more in order to guage the variances between the genders in prison. The survey will also explore conditions in prisons, such as healthcare, programming, and mental health care. The rate of women going to prison is rising and this study will attempt to uncover factors contributing to this shift by comparing both conditions leading to incarderation as well as experiences in prison for both genders. This study was supported by MSU Undergraduate Research Fellowship.
Project Dissemination:
Poster Presentation:
Jacque, Demi and Perkins, Elizabeth (2013, April). The Causal Links in Incarderation of Males and Females in the United States. Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.
Awards and/or Honors:
N/A
Post-Graduation Plans (Seniors only):
N/A

Jones, Tina

Major:
Social Work
Faculty Mentor:
Lisa Shannon
Research/Project Title:
Identification of Resource Disparities in the Gateway Service Region: A Needs Assessment
Project Abstract/Summary:
Each year, the Gateway Community Action Council conducts a needs assessment to identify resource disparities and aid in developing a strategic fuding plan. This plan serves Bath, Menifee, Montgomery, Morgan, and Rowan Counties. Data for this poster was gathered from 381 clients who completed the Gateway Community Action Council Clients Needs Assessment. The mean age of the participants was 50.01 years (SD=17.937). Nearly half (46.2%) reported an income less thant $10,000 per year. The majority of respondents were female (76,1%) and Caucasian (94.0%). Over one-third (35.2%) were married, and resided in Montgomery County (36.7%). The most commonly selected needs were emergency services (35.2%), and employment (12.3%). Project support came from the MSU undergraduate research fellowship from the department of Sociology, Social Work, and Criminology.
Project Dissemination:
Poster Presentation:
Tina Jones and Lisa Shannon (2013, April). Identification of Resource Disparities in the Gateway Service Region: A Needs Assessment, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

Award of Special Merit, Poster presentation,Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Post-Graduation Plans (Seniors only):

Pursuing a career in research.

Pennington, Sonja

Major:

Criminology

Faculty Mentor:

Elizabeth Perkins

Research/Project Title:

Personal Trauma: A Double-edged Sword for Substance Abuse Counselor's Working with Offenders

Project Abstract/Summary:

I assisted Dr. Perkins with the qualitative analysis of 20 qualitative face-to-face interviews conducted with substance abuse counselors who work with offenders. The rate of offenders seeking substance abuse treatment is rising, which results in substance abuse counselors facing increasing caseloads putting them at a higher risk for burnout and compassion fatigue. Substance abuse counselors are thought to be especially vulnerable to compassion fatigue due to the high percentage of clients they treat who have trauma histories. The purpose of this study was to investigate if substance abuse counselor burnout and compassion fatigue vary between counselors who work in a prison versus those who work in community care with offenders. Five major themes emerged from the data. This research was supported by an MSU Undergraduate Research Fellowship.

Project Dissemination:

Poster Presentations:

Pennington, Sonja and Perkins, Elizabeth. (2013, March). Personal Trauma: A Double-edged Sword for Substance Abuse Counselor's Working with Offenders, ACJS Annual Meeting, Dallas, TX, March.

Pennington, Sonja and Perkins, Elizabeth. (2013, April). Personal Trauma: A Double-edged Sword for Substance Abuse Counselor's Working with Offenders, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April..

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Story, Danielle

Major:

Sociology

Faculty Mentor:

Bernadette Barton

Research/Project Title:

Fighting the "F" Word: Organizing and Recruiting for a Feminist Group

Project Abstract/Summary:

Continuing efforts to develop feminist consciousness raising groups on college campuses today remain as imperative as during the Second Wave of the Women's Movement. The combination of backlash against women's improved status and opportunities, raunch culture, an increasingly androsexist media, and an absence of gender equality curriculum in education means that most students are, at best, uninformed about feminism, and at worst, perceive feminism negatively. Drawing on ethnographic observations and interviews with other student leaders, this study explores the challenges of organizing and recruiting for a feminist group SAGE (Student Association for Gender Equality) at Morehed State University. In particular, this study explores how female and male leaders experience leading a feminist student group, challenges with organizing and recruitment, and overall dilemmas faced by social feminist activist groups.

Project Dissemination:

Poster Presentation:

Story, Danielle, Barton, Bernadette, and Hardesty, Constance (2013, February). Fighting the "F" Word: Organizing and Recruiting for a Feminist Group. Posters-at-the-Capitol, Frankfort, KY, February.

Oral Presentation:

Story, Danielle, Barton, Bernadette, and Hardesty, Constance. (2013, April). Fighting the "F" Word: Organizing and Recruiting for a Feminist Group, Celebration of Student Scholarship, Morehead State University, Morehed, KY, April.

Awards and/or Honors:

Undergraduate Award for Social Activism, Sociologists for Women in Society, Winter Meeting, February.

People's Choice Award for Presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Merit Award for Presentation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Post-Graduation Plans (Seniors only):

Student plans to take the GRE and start looking into graduate school.

Willis, Hannah

Major:

Criminology/Government

Faculty Mentor:

Rebecca Katz

Research/Project Title:

Humanistic Criminology: Explaining Gendered and Race Identity: Empathy and Helpful and Hurtful Behavior

Project Abstract/Summary:

Interviews with twenty-one incarcerated men reveal traumatic grief responses among all but one of the interviewees. Most men experienced one or more of the following traumas: childhood physical or secual abuse, the equivalent of the horrors of combat as the result of growing in violent neighborhoods where they witnessed murder and violence on a daily basis, witnessing parental intimate partner violence, parental abandoment and parental drug and alcohol addiction. Most of these men also had poor parent-child attachments and limited capacities for empathy. We argue that these experiences with complicated traumatic grief result in a compulsion to repeat the trauma until there opportunity avails itself for these men to be able to process these traumatic experiences and emotions. We call for the need for intensive therapy for incarderated men.

Project Dissemination:

Ms. Willis and Dr. Katz jointly presented two papers at the Annual Society of Criminology Meeting in November in Washington, D.C. in 2012. Ms Willis presented our preliminary findings at the Student Celebration of Scholarship and received a Certificate of Merit. Ms. Willis has observed several interviews at the prison this year and is developing her own paper for presentation in November of 2013 at the Annual Society of Criminology meeting based on our research. Finally, we currently have a manuscript in review with the Journal of Qualitative Sociology illustrating our findings from outlined above. While we have finished collecting data at the prisons, we are continuing to collect data from the Morehead Inspiration Center from the male residents.

Awards and/or Honors:

Ms. Willis earned a certificate of merit for her presentation last month at the Celebration of Student Scholarship for her presentation of our findings. She also competed with other students nationally and received an internship with the Canadian parliament for five weeks this summer.

Post-Graduation Plans (Seniors only):

Following graduation Ms. Willis plans to apply to work for the Federal Bureau of Prisons and eventually attend Graduate school in psychology..

COLLEGE OF EDUCATION

DEPARTMENT OF EARLY CHILDHOOD, ELEMENTARY, AND SPECIAL EDUCATION

Chalk, Katarina

Major:

Elementary Education

Faculty Mentor:

Kim Nettleton

Research/Project Title:

Glimpses in the Past: Change and Continuity in the Schoolhouse

Project Abstract/Summary:

From the Rowan County War in the 1880's to World War II in the 1940's, education in Rowan County changed dramatically. In early years, children were taught in one room school houses and eventually, with the development in education and the war, schools were consolidated. Using footage from the 1940's in Rowan County schools and interviews, a picture of the past emerges that documents the strengths of the one room school and the changes that emerged with consolidation.

Project Dissemination:

Poster Presentation:

Chalk, K. (2013, April). Glimpses in the Past: Change and Continuity in the Schoolhouse, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

Honored at Morehead State University College of Education Honors Reception, April, 2013.

Post-Graduation Plans (Seniors only):

N/A.

Clausen, Amy

Major:

MSD/Special Education

Faculty Mentor:

Sarah Hawkins-Lear

Research/Project Title:

Successes and Challenges of Conducting a Transition Fair in a Rural Community

Project Abstract/Summary:

Over the past four years, students from EDSP 372, Transition to Adult Life and the Student Council for Exceptional Children have partnered to host a Transition Fair for individuals with disabilities from surrounding counties. The Transition Fair included three breakout sessions for students and also a chance for students to meet representatives from colleges, state agencies, and organizations. The purpose of this study is to synthesize survey data from participating teachers and agencies across the past three years. Another major component of this research is to take comments from the teachers and agencies along with research regarding transition to adult life to make suggestions and changes for future Transition Fairs.

Project Dissemination:

Oral Presentations:

Hawkins-Lear, S. & Clausen, A. (2012, November). Successes and Challenges of Conducting a Transition Fair in a Rural Community, Kentucky Exceptional Children's Conference, Louisville, KY, November.

Clausen, A. & Hawkins-Lear, S. (2013, April). Successes and Challenges of Conducting a Transition Fair in a Rural Community, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Poster Presentations:

Hawkins-Lear, S & Clausen, A. (2012, November). Successes and Challenges of Conducting a Transition Fair in a Rural Community, TASH International Conference, Long Beach, CA, November.

Hawkins-Lear, S. & Clausen, A. (2013, March). Successes and Challenges of Conducting a Transition Fair in a Rural Community, Council for Exceptional Children National Conference, San Antonio, TX, March.

Awards and/or Honors:

Certificate of Merit: Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Post-Graduation Plans (Seniors only):

N/A.

Geiman, Laura Jennifer

Major:

Education

Faculty Mentor:

Martha Decker

Research/Project Title:

Read, Write, Publish: Lessons from a Child

Project Abstract/Summary:

The reading – writing processes of 18 first graders in rural Appalachia are examined during an entire school year. The developmental changes over time in these students' reading and writing abilities are closely investigated. The foundational theories of Dewey, Vygotsky and others from over a century ago, along with current fundings in cognitive and neuro-science (Davidson, Armstrong) that substantiate these theories, provide the conceptual framework for this study. Through weekly observations it became evident how instruction must not be one size fits all, and that the teacher must highlight the students' individual strengths. Using Universal Design for Learning (C.A.S.T.; Rose) my findings include seeing marked growth in all students as well as my own. Results of this study include my own increased knowledge of the literature in early literacy, universal design with an indepth experience of working with eighteen unique students and watching their growth from the beginning of the year to the end. Each student has created an individual picture-story book that is being published by Nationwide Learning (Topeka, KS), and I am completing a journal article for submission for publication with Dr. Decker's assistance. I plan to continue this collaborative work next year.

Project Dissemination:

Oral Presentation:

Geiman, Laura J. (2013, April). Highlight My Strengths. Southern Regional Honors Conference, Louisville, KY, April.

Poster Presentation:

Geiman, Laura J. (2013, April). From Zero to Zoom. Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Assisting Mrs. Rhonda Blevins, FMD teacher, Rodburn Elementary, in her project using Universal Design for Learning with her students, April – May. I learned to video-tape the students and see the multiple means of representation, engagement, action and expression which was valuable in making connections.

Awards and/or Honors:

Celebration of Student Scholarship Certificate of Merit for "From Zero to Zoom: Lessons from a Child."

College of Education Recognition of Undergraduate Research: "Read, Write, Publish!"

Post-Graduation Plans (Seniors only):

N/A.

Heston, Caroline

Major:

IECE Early Childhood Development

Faculty Mentor:

Mee-Ryoung Shon

Research/Project Title:

Benefits of Origami in the Early Childhood Classroom

Project Abstract/Summary:

This project will explain the benefits of origami in the early childhood classroom. Origami can serve as a great way to enhance children's linguistic intelligence, logical-mathematical intelligence, bodily-kinesthetic intelligence, spatial intelligence, interpersonal intelligence, and intrapersonal intelligence. Origami also teaches students astract ways of thinking and ways to explore their creativity. Students who have trouble following directions benefit from origami because it involves following step by step processes. Also, origami introduces students to new cultures as it originated in China and Japan. Dr. Shon and I have visited the 1st grade classroom at Rodburn Elementary and completed origami activities with the kids. We will share our findings through this project to further support our theory that origami can support a greater learning potential in the classroom. We found that origami does in fact have positive influences on the early childhood classroom as we saw students demonstrate using prior knowledge, fine motor development, visual-spatial skill development, and more.

Project Dissemination:

Physical Education Draft for publication consideration with Dr. Shon during Fall 2012.

Poster Presentation:

Heston, Caroline (2013, April). What are the Benefits of Origami in the Early Childhood Classroom, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

Certificate of Merit for Education Department for Celebration of Student Scholarship, Morehead State University, Morehead, KY.

Post-Graduation Plans (Seniors only):

Student teaching in Spring of 2014 and will graduate with a degree in IECE.

Koontz, Kelsey

Major:

Elementary Education P-5

Faculty Mentor:

Edna Schack

Research/Project Title:

Stages of Early Arithmetic Learning: A Context for Learning to Professionally Notice

Project Abstract/Summary:

The focus of this research project is the development of the skills of early numeracy (the awareness of relationships and patterns that make up the foundation of mathematics) through specific small group instruction strategies. To gather this data, a class of first grade students was assessed using the Student Numeracy Assessment Progressions (SNAP) mathematical interviews. The SNAP assessment includes six categories of early numeracy: counting forwards, counting backwards, grouping, identifying numerals, sequencing, and addition and subtraction. Professional noticing was used to place each student on a six point scale to indicate their level of understanding. The strategies of attending, interpreting, and deciding are essential to professional noticing and were implemented during the diagnostic interviews. Attending refers to seeing the strategies used by students to solve the problems. Interpreting is an awareness of the child's abilities and understandings in the context of the mathematics. Deciding refers to asking appropriate questions to reach a deepr understanding of the students' knowledge and making instructional decisions. Following the SNAP assessments a group of children in need of intervention in early numeracy was identified. A set of pre-planned strategies focused on a few specific early numeracy categories was implemented with this small group. A matched group with similar pre-assessment scores did not receive intervention. The treatment group showed more improvement in four of the five assessed areas,backward number word sequence, finger patterns, spatial patterns, and addition, when compared to the control group.

Project Dissemination:

Poster Presentations:

Koontz, K.L. (2013, February). Assessment of Early Numeracy, Transforming Education for a Brighter Tomorrow, Posters-at-the-Capitol, Frankfort, KY, February.

Koontz, K.L. and Schack, E.O. (2013, February). Developing Early Numeracy, Kentucky Center for Mathematics: Reasoning for Readiness 2013 Conference, Lexington, KY, February.

Koontz, K.L. (2013, April). Assessment of Early Numeracy, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

Outstanding P-5 Undergraduate. Spring 2013, Morehead State University, Morehead, KY.

Post-Graduation Plans (Seniors only):

Ms. Koontz will pursue a Masters Degree at Morehead State University in the Masters Teacher Leader Program with an emphasis in mathematics education.

DEPARTMENT OF FOUNDATIONAL AND GRADUATE STUDIES IN EDUCATION

Kendall, Brooklyn

Major:

Elementary P-5 and Special Education (LBD)

Faculty Mentor:

Daryl Privott

Research/Project Title:

Kentucky College and Career Readiness Initiative (KCCRI) College and University Initiatives Survey

Project Abstract/Summary:

This ongoing project is to identify the "Top 10" initiatives (programs, workshops, online modules, webinars, conferences, PLC, workgroups, etc) that are occuring or have occurred in the last 18 months at colleges and universities in Kentucky to inform faculty members about the SB1/Unbrideled Learning Legislation, Commonwealth Commitment and the Council on Postsecondary (CPE) Unified Strategies.

A few of the objectives are to develop an inventory of what is happening across the state in an effort to better understand how we are supporting the goals of the SB1/Unbridled Learning Legislation, supporting our students with their college and career readiness, providing opportunities for our faculty and staff, and gathering data to support budget discussions and attract external funding opportunities.

The initial stages of this project involved the development and deployment of the survey instrument that is being used to collect information from Kentucky colleges and universities. This research work was funded by the Council on Postsecondary Education (CPE) and involves working with the University of Kentucky P20 Data Collaborative.

Project Dissemination:

N/A

Awards and/or Honors:

Recipient of 2012-2013 Junita Losey Scholarship

Post-Graduation Plans (Seniors only):

Ms. Kendall will being her student teaching and is scheduled to complete the program.

21ST CENTURY EDUCATION ENTERPRISE

Brewington, Megan

Major:

Elementary Education P-5

Faculty Mentor:

Krista Barton

Research/Project Title:

Student Perceptions of One-to-One iPad Implementation

Project Abstract/Summary:

Mason County High School in Maysville, KY embarked this year on a 1:1 iPad implementation. All faculty, staff, and students were given iPads to use for both school and personal use. Currently, this implementation is ranked the 89th largest in the world (Forbes). This presentation will discuss qualitative data collected in the first year. The data point included is the effect on student motivation from the one-to-one iPad implementation that took place in the current school year. Morehead State University, College of Eduction sponsored this research through the Undergraduate Research Fellowship program.

During this research I found that students identified best practices and barriers of the iPad implementation. Also an interesting trend that emerged from the research is that student responses about best practices and barriers were diverse from different grade levels. A hypothesis that has been made is that student perceptions of the iPads depend on their age and maturity level. More research will be conducted to verify this hypothesis.

Project Dissemination:

Poster Presentation:

Brewington, Megan, Barton, Krista, and Curry, John. (2013, April). Student Perceptions of One-to-One iPad Implementation, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A.

Johnston, Allison

Major:

Communications

Faculty Mentor:

Rebecca Roach

Research/Project Title:

Integrating Technology into the Jackson Independent School District: Analyzing Leadership Style and Cultural Change

Project Abstract/Summary:

Jackson Independent School system has become a primer district in Kentucky and model for technology use in the classroom. Through a partnership with KY Dataseam, they successfully integrated classroom websites into their district. Since this transition, parent and community involvement, student achievement, and teacher satisfaction have been on the rise. This study analyzed exactly how that shift happened. Results of this study concluded that Jackson used several different frames of leadership in order to produce this cultural change. The leadership style was assessed based on the widely accepted theory by Bolman and Deal, Reframing Organizations. It was found that the administration at Jackson Independent understood effective leadership and utilized those techniques when making the transition to the use of websites in the classroom.

Project Dissemination:

Poster Presentation:

Johnston, Allison and Roach, Rebecca (2013, February). Integrating Technology into the Jackson Independent school district: Analyzing Leadership Style and Cultural Change, Posters-at-the-Capitol, Frankfort, KY, February.

Oral Presentation:

Johnston, Allison and Roach, Rebecca (2013, April). Integrating Technology into the Jackson Independent School District: Analyzing Leadership Style and Cultural Change, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

Distinguished Merit for the College of Education, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Exceptional Merit for the College of Education, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Post-Graduation Plans (Seniors only):

N/A.

DEPARTMENT OF MIDDLE GRADES AND SECONDARY EDUCATION

Bender, Rachel

Major:

Middle Grades Education

Faculty Mentor:

Kim Sharp

Research/Project Title:

The Pedagogical Benefits of Using Controversial Song Lyrics to Teach Social Studies

Project Abstract/Summary:

The purpose of this project is to provide the foundation for a book that I am presently outlining for publication concerning the pedagogical uses and benefits of utilizing music lyrics as a means to teach controversial social issues. Although this counds like a “simple” project and one that anyone could randomly say “hey, I think this song has a relevant message, I think I’ll use that in class,” my intentions are much more developed than that and scholarly. I hope you will agree.

For 10 years, I have been focusing much of my research on the 7 Problematic Areas of the Social Studies developed by Hunt and Metcals (1968) and how it measures up in classroom practice today.My research informs me that the instrument is still relevant today as a means to classify pervasive controversial issues in our society. Thus, my intention of this project is to further employ the Hunt & Metcalf model by researching music lyrics which speak precisely to those themes. I will do this by:

1. Continuing my research into the relevance and pervasiveness of the Hunt & Metcalf 7 Problematic Areas of the Social Studies;
2. Researching a variety of music genres (i.e., hip-hop, country-western, rock, metal, pop, etc) to understand the intentions of the entertainers and the messages they convey through their music;
3. Finding a discernable match between the 7 Problematic Area classifications and the music genres in which to assign specific songs and messages for pedagogical purposes;
4. Providing instructional strategies utilizing the music from each genre in the social studies setting.

This project is going to serve as the foundation to a book that I will write addressing:

1. The educative and intellectual benefits of utilizing music the social studies;

2. The "Seven Problematic Areas of the Social Studies," (Hunt & Metcalf, 1968) and the classification rubric for selecting appropriate songs and video;
3. 7 chapters delving specifically into the "problematic areas" (one chapter per area) of the social studies and matched to a particular genre of music (i.e., hip-hop, metal, rap, country, indie, etc.). Specific teaching strategies will be presented in these chapters

So far, we have compiled a literature review, an extensive list of possible songs and lesson plans, as well as completed one lab in a sixth grade social study classroom.

Project Dissemination:

Ms. Bender presented at the Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Ms. Bender's proposal for presentation at the 93rd Annual Conference of the National Council for the Social Studies was accepted – this is November 21-23, St. Louis, MO.

Ms. Bender and I have been invited to write a book chapter this summer about using song lyrics as a primary source to teach the new Common Core curriculum.

Ms. Bender and I are also writing a manuscript for publication consideration in the Kentucky Reading Association Journal.

Awards and/or Honors:

Ms. Bender's proposal for presentation at the 93rd Annual Conference of the National Council for the Social Studies was accepted, St. Louis, MO, November.

Ms. Bender and I have been invited to write a book chapter this summer, about using song lyrics as a primary source to teach the new Common Core curriculum.

Post-Graduation Plans (Seniors only):

N/A.

Bodenlos, Emily

Major:

P-5 Education

Faculty Mentor:

Lesia Lennex

Research/Project Title:

3D in Schools

Project Abstract/Summary:

Action research with 3D iPad apps in 4th grade science, social studies, and language arts instruction involving the curriculum construction, delivery, and analysis of learning is intended for 2012-2013. Two MSU grants have funded for the 2012-2013 calendar year iPads and science professional development the fourth grade teachers at Rodburn Elementary School, Rowan County, KY. We also worked with physical sciences 4th grade teacher at McBrayer Elementary in Spring 2013. The results of the research demonstrate that the use of 3D apps is promising for increasing achievement and transfer of knowledge. Apps used are under analysis as are transcripts of the actual classroom lessons and use of the apps.

Project Dissemination:

Book Chapters:

Bodenlos, E., & Lennex, L. (2013). 3D Science and Social Studies in Grades 5-6: Virtualization Expanding Instruction. In Dr. Kimberely Nettleton & Dr. Lesia Lennex (Ed.), Cases on 3D Technology Application and Integrration in Education. (pp. tba.) Hershey, PA: IGI Global.

Spencer, K., Lennex, L., & Bodenlos, E. (2013). 3D Technology in P12 Education: Cameras, Editing, and Apps. In Dr. Kimberely Nettleton & Dr. Lesia Lennex (Ed.), Cases on 3D Technology Application and Integration in Education. (pp.tba.). Hershey, PA: IGI Global.

Grants:

Lennex, L., & Bodenlos, E. (2012). 3D in Schools. Research and Sponsored Programs, Morehead State University, Morehead, KY.

Lennex, L., & Bodenlos, E. (2012). 3D Technology Advancing Curriculum and Learning Achievements of Fourth Graders. Center for Regional Engagement, Morehead State University, Morehead, KY.

Presentations:

Lennex, L., & Bodenlos, E. (2013). 3D Apps in Fourth Grade Curriculum. Society for Information Technology and Teacher Education (SITE), New Orleans, LA, March. Dr. Lennex presented, Bodenlos co-wrote proposal and proceedings. International Meeting.

Bodenlos, E. (2012). iPad Apps in the Elementary School Classroom, Mid-South Research Association Regional Meeting (MSERA), Lexington, KY, November.

Bodenlos, E., & Lennex, L. (2012). Curriculum Building for 3D in the P12 Classroom. International Society for Technology Education International Meeting (ISTE), San Siego, CA, June.

Poster Presentation:

Bodenlos, E., & Lennex, L. (2013, April). Using iPad Apps to Support Curriculum in Fourth Grade, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Bodenlos, E. (2012, November). 3D Technology: Changing the Way Students Learn, Mid-South Research Association Regional Meeting (MSERA), Lexington, KY, November.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A.

Chapman, Jaime

Major:

Middle Grades Education

Faculty Mentor:

Jody Fernandez

Research/Project Title:

Keeping the Momentum Going: Transitioning Struggling Adolescent Readers from Elementary Schools

Project Abstract/Summary:

Edmodo is a free social networking website that allows teachers to interact with their students on different levels. Edmodo allows teachers and students to communicate via a safe internet site. Along with calendars of due dates and reminders, students and teachers can post podcasts, articles, links, pictures, graphs, assignments, videos, and documents. This interactive website was one of the teaching strategies implemented at Menifee County Middle School during the 2012-2013 school year as part of a content area literacy initiative. The goal of this research was to investigate the use of Edmodo to meet student needs and improve literacy in the classroom. The overall Menifee content literacy initiative was implemented via a CCLD grant. An undergraduate research fellowship supported the research on Edmodo.

Project Dissemination:

Poster Presentation:

Chapman, Jaime, (2013, April). An Educational Social Networking Website: Analyzing Menifee County Middle School's Use of Edmodo. Celebration of Student Scholarship, Morehead State University, Morehead, KY, April

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

COLLEGE OF SCIENCE AND TECHNOLOGY

DEPARTMENT OF AGRICULTURAL SCIENCES

Griesenauer, Justine

Major:

Pre-Veterinary Medicine

Faculty Mentor:

Barb Lewis

Research/Project Title:

Utilizing the McMaster's Quantitative Fecal Exam Technique to Determine the Need for Deworming and the Efficacy of Anthelmintic Dewormers in the MSU Equine, Bovine, and Ovine Herds.

Project Abstract/Summary:

Internal parasite infestations are common in grazing animals, who are exposed to infective larvae in their environment, on a daily basis. It is not feasible, nor medically appropriate, to deworm these animals randomly or excessively. They are dewormed periodically, when they have a high parasite burden, or when they are clinically ill. Effective deworming protocols inlcude knowledge of individual parasite burdens to determine if deworming is warranted at that time, and subsequent determination of the efficacy of the dewormer used.

The MSU equine, bovine ad ovine herds were sampled on a weekly basis and analyzed for internal parasite infestations utilizing the McMaster's Quantitative Fecal Method. Determinations were made, based on ova numbers, whether the animals warranted deworming at that time. In several instances, parasite burdens were low and the decision was made by the Farm manager to delay deworming. As parasite burdens increased over time, the decision was made to deworm individual groups of animals. Approximately 2 weeks post-deworming, the herd was sampled again, in order to determine the efficacy of the dewormer. The Fecal-Egg Count Reduction formula was used to determine efficacy, which was found to be approximately 70%. The results were shared with the MSU Farm manager and staff to assist in deworming schedules of horses, cattle and sheep.

Project Dissemination:

No dissemination at this time.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Ms. Griesenaur plans to apply to veterinary school

Moore, Tyler

Major:

Agricultural Sciences

Faculty Mentor:

Tyler Mark

Research/Project Title:

Trends in the Department of Agricultural Sciences Enrollment, Retention, and Potential Implications

Project Abstract/Summary:

The objectives of this research are two-fold. First, is to evaluate previous and current trends in the Department of Agricultural Sciences with respect to enrollment and retention rates. Our hypothesis is that specific events, such as the arrival and departure of faculty memebers and the inception of the Ag Ambassador Program affect these trends. Second, is to examine how these trends influence the current and future resource allocations of the department. Knowledge gained from this research could be invaluable for efficient allocation of resources and the development of departmental strategic plan.

Project Dissemination:

The data has been compiled, however to this point it has not been analyzed or presented.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

To continue on to graduate school.

Utterback, Tanner

Major:

Agricultural Sciences

Faculty Mentor:

Tyler Mark

Research/Project Title:

Low Cost Biomass Saccharification Process for Producing Biofuels

Project Abstract/Summary:

The goals of this research project are to expand and validate technology that takes advantage of the photosynthetic energy stored in plant biomass for release of low cost sugars that can be converted into transportation fuels such as ethanol or algae oil or bio-products. Woody biomass and dedicated perennial energy crops have been identified as primary biomass feedstock in eastern Kentucky. The woody biomass could be from integrated harvesting for biofuels, forest residues from existing industries, forest thinnings and mill residues. Dedicated bioenergy crops could utilize reclaimed mine site property for switchgrass, miscanthus or short rotation woody crops like popular.

This is a multi-phase project that could lead to several commercial industries in eastern Kentucky. Phase 1 of this proposal is for the validation and scale-up of bench scale technologies. Upon successful completion of Phase I a second would lead to commercialization.

The unique aspects of the Pre-Pilot Biomass Sugar Refinery process is that it can pre-treat biomass particles at greater sizes than reported in the literature (Decker, et al., 2009) while maintaining high sugar yields. Therefore a reduction in time and energy in the biomass pre-process step is achieved compared to literature standards. In addition the temperature required during the chemical pretreatment is slightly less than that reported in most of the literature (900C vs 100 to 1200C) further reducing the total energy inputs for the process (Decker, et al., 2009). This process optimizes the biomass grind size with the concentration of NaOH and temperature/time requirement of the pre-treatment.

Project Dissemination:

This project just got started this summer. We are still collecting information and Mr. Utterback is working on one manuscript currently.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Mr. Utterback plans to teach High School Agriculture.

Wilson, Clayton

Major:

Agricultural Sciences

Faculty Mentor:

Tyler Mark

Research/Project Title:

New Faculty Start-up Grant

Project Abstract/Summary:

This research project will investigate several different aspects of biofuel production in Kentucky. The different areas to be examined are; 1) volume of wood residues in Eastern Kentucky, 2) amount of idle land available in Eastern Kentucky for biomass production, 3) potential sources of demand for these fuels, and 4) storage and transportation issues for these renewable energy sources.

Project Dissemination:

This data has been compiled and analyzed. We are currently working on two manuscripts.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

DEPARTMENT OF APPLIED ENGINEERING AND TECHNOLOGY

Greene, Andrew

Major:

Engineering Management

Faculty Mentor:

Hans Chapman

Research/Project Title:

Improved Testing Capabilities for Solar Energy in Eastern Kentucky

Project Abstract/Summary:

This research was aimed at improving the existing solar resource testing capabilities for the region, using Morehead State University as a test site. The methods employed involved outdoor measurements of solar irradiance, using a hand-held solar irradiance meter. Acquired data has been analyzed with RETScreen Energy Model software. The results obtained have been compared with data from the Kentucky Mesonet Station at the Derrickson Agricultural Complex in Morehead. These results show a correlation with atmospheric factors such as ambient temperature and

wind speed. The development of more location-specific solar resources has the potential to increase the level of interest and investments in renewable energy technologies in the region. This research presents a valuable intellectual merit. The study and its outcomes can serve as a foundation for further research in renewable energy at MSU and in the region.

Project Dissemination:

N/A

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

White, Brandon Scotty

Major:

Engineering and Technology

Faculty Mentor:

Hans Chapman

Research/Project Title:

Design of a Solar Testing Facility at Morehead State University

Project Abstract/Summary:

Increasing energy demand and cost have heightened the need for more research in alternative renewable energy sources. Outdoor testing of solar systems has challenges due to uncontrollable atmospheric factors, such as wind, cloud cover, and humidity. These challenges make a strong case for indoor-testing facilities where the ambient conditions can be controlled with the appropriate equipment. This work focuses on the design of a stand-alone solar testing center for MSU. The proposed eco-friendly design will serve a broader impact as a research and learning experience for practitioners and students interested in alternative energy sources. This research is supported by the MSU Undergraduate Research Fellowship and a grant provided by the MSU Office of Research and Sponsored Programs.

Project Dissemination:

N/A

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

DEPARTMENT OF BIOLOGY AND CHEMISTRY

Carder, Jackie

Major:

Biology

Faculty Mentor:

Sean O'Keefe

Research/Project Title:

Effectiveness of Trapping Method in Relation to Functional Feeding Group for Beetles

Project Abstract/Summary:

Biodiversity assessments are an indispensable tool for conservation evaluation. Beetles in particular are an ideal group to use for such assessments as they are extremely diverse, very abundant, fill numerous ecological roles, and can be assessed quantitatively and qualitatively via many means. One useful way to categorize insects is via functional feeding groups. This method categorizes groups of insects according to mechanisms for acquiring food, as opposed to taxonomic grouping which seeks to provided a name for each individual insect and is thus more cumbersome. This approach can also provide some insight into food availability and quality of the study site. Examples of functional feeding groups include predators, herbivores, detritivores, scatophages, necrophages, and fungivores. Three rounds of sampling were conducted at three Wolf Penn Sites in the Daniel Boone National forest. Our pilot study lasted from 10 – 26 Aug 2011, and two additional sampling sessions were from 18 May – 14 June 2012 and 19 July – 14 Aug 2012. The three trapping methods employed include: yellow pan traps; pitfall traps, and Lindgren funnel traps.

Project Dissemination:

Poster Presentations:

J. Carder, R. Roberts, and S. O'Keefe, (2012, April). Yellow Pan Traps as an Efficient Method to Assess Beetle Diversity, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

J. Carder, R. Roberts, and S. O'Keefe. Yellow Pan Traps as an Efficient Method to Assess Beetle Diversity, Kentucky Academy of Science 2012 Annual Meeting.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Will begin internship at a parasitology lab in Boulder, CO.

Davis, Harley

Major:

Biomedical Sciences

Faculty Mentor:

Kurt Gibbs

Research/Project Title:

Quantification of Socs2 mRNA Expression and Cell Type Identification in Xenopus Laevis after Spinal Cord Injury

Project Abstract/Summary:

Some "lower" vertebrates are capable of recovering from central nervous system (CNS) injuries by regenerating damaged neural tissue. In previous work we found that reticular neurons in the hindbrain of Xenopus laevis tadpoles, whose axons descend into the spinal cord, have the ability to regenerate their axons after a complete transection (Biggs & Szaro, 2006). As tadpoles metamorphose into frogs, they lose the ability to regenerate spinal cord axons, demonstrating a loss of regenerative capacity with advancing development (Gibbs et. Al., 2011). When assayed by microarray analysis, we found an increase in Socs2 mRNA expression in tadpoles after spinal cord injury, and a decrease in the adult after injury. In addition, Socs2 had been shown to promote axon outgrowth in cultured mammalian neurons (Goldschmidt et. Al., 2004). These data suggest that Socs2 may play a role in promoting axon regeneration after spinal cord injury, but its exact function has yet to be uncovered. The purpose of our current study was to investigate messenger RNA (mRNA) levels of Socs2 at different time points after complete spinal cord transection in an attempt to understand its regulation and role in recovery from spinal cord injury. To more accurately quantify the amount of Socs2 mRNA, we used quantitative real-time polymerase chain reaction (qRT-PCR) to measure mRNA levels in the hindbrain. In addition, we will identify exactly which cells express Socs2 mRNA by using in situ hybridization on slides of sectioned hindbrain tissue. We plan to use these data to guide additional experiments intended to elucidate the functional significance of Socs2 in recovery from CNS injury.

Project Dissemination:

N/A

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Dyer, Haley

Major:

Biomedical Research

Faculty Mentor:

Craig Tuerk

Research/Project Title:

Optimizing PCR of Randomized Oligonucleotide Template for RNA Libraries

Project Abstract/Summary:

The long-term goal of this project is to create randomized RNA libraries containing numerous (10^{15}) sequences from which individual molecules can be isolated that : 1) blind with high affinity to small molecules (MW 500-800 daltons), 2) cross-link through a reactive end-group to that bound small molecule. This final step would allow novel isolation of small molecules that interact with specific targets, pharmaceutical or diagnostic. The immediate goal within the scope of this undergraduate project is to amplify oligonucleotide templates to optimize diversity (maximum number of different sequences) and purity (uniformity of size and constant regions required for replication). Pilot assays are being conducted to optimize both diversity and precision during amplification using PCR to be followed by large-scale transcription to create the RNA library.

Project Dissemination:

Poster Presentation:

Haley E. Dyer, Ellen M. Kolb, and Craig Tuerk, (2013, April). Optimizing PCR of Randomized Oligonucleotide Template for RNA Libraries, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Evans, Victoria D.

Major:

Biology

Faculty Mentor:

Allen C. Risk

Research/Project Title:

Lichen Species Inventory for Carter Caves State Resort Park, Carter County, KY.

Project Abstract/Summary:

Lichens are a complex symbiosis made of two components: a fungus and an organism capable of producing food, either green-algae or cyanobacteria. Lichens are a vital part of forest ecosystems: those containing cyanobacteria are able to convert nitrogen in the atmosphere into usable nitrogen compounds for plants in the surrounding area. They are one of the first pioneers in the new environment, able to colonize rocks, soil, bark, and wood. The primary objective of this study was to conduct a lichen species inventory for Carter Caves State Resort Park. A total of 214 specimens have been collected from the park with 88 species identified (55 Foliose, 5 Fruticose, 16 Crustose, and 12 Cladonia). Five new lichen species have been identified for the park in this study.

Project Dissemination:

Oral Presentations:

Evans, Victoria D. and Risk, Allen C. (2013, April). Lichen Species Inventory for Carter Caves State Resort Park, Carter County, KY, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

Certificate of Merit, Oral Presentation, Celebration of Student Scholarship, College of Science and Technology, Morehead State University, Morehead, KY, April.

Post-Graduation Plans (Seniors only):

N/A

Farrell, Jessica

Major:

Biology

Faculty Mentor:

Matthew Ellison

Research/Project Title:

The Role of Zinc in Pseudomonas Aeruginosa Virulence

Project Abstract/Summary:

Pseudomonas aeruginosa is a bacterial pathogen that can cause disease in immunocompromised individuals. We recently identified a link between zinc homeostasis and the ability of this pathogen to cause disease. Jessica spent the Fall semester screening a mutant library to identify genes involved in zinc resistance. The goal was to identify genes involved in controlling zinc toxicity and then screen these genes to determine which are involved in virulence. Student was unable to complete project.

Project Dissemination:
N/A
Awards and/or Honors:
N/A
Post-Graduation Plans (Seniors only):
N/A

Ferrell, Joshua

Major:
Chemistry/Biology
Faculty Mentor:
Janelle Hare
Research/Project Title:
Rt-qPCR Analysis of DNA Damage-regulated Genes in Acinetobacter Species
Project Abstract/Summary:
Work towards verifying previously acquired transcriptome data was assessed with qRT-PCR. This proved difficult but steady progress has been made after optimization of RNA clean-up, primer selection, and experimental design. Joshua is continuing to work in Summer 2013 on this project. The transcriptome analysis was much further refined by Joshua and Dr. Hare during the year, allowing us to present our analysis at several conferences.
Project Dissemination:
Poster Presentations:
Ferrell, J., J. Bradley, and J.M. Hare (2013). The DNA Damage Transcriptome of Acinetobacter Species Reveals Induced Gene Clusters in Genetic Islands Containing Virulence Genes in A. Baumannii, 113th General Meeting of the American Society for Microbiology, Denver, CO.
Ferrell, J., Bradley, J., and J.M. Hare (2012). Transcriptome Analysis of Acinetobacter Baylyi ADP1 in Response to DNA Damage. Kentucky Academy of Sciences General Meeting, Richmond, KY.
Ferrell, J., Bradley, J., and J.M. Hare (2012, April). Transcriptome Analysis of Acinetobacter Baylyi ADP1 in Response to DNA Damage. Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.
Presentation
Bradley, J., Ferrell, J., and J.M. Hare (2012, June). Next Generation Sequencing of the Acinetobacter Baylyi DNA Damage Response Transcriptome, NISBRE, Washington, DC, June.
Awards and/or Honors:
3rd place Oral Presentation, Kentucky Academy of Science Meeting, Richmond, KY, November.
Post-Graduation Plans (Seniors only):
University of Kentucky PhD program; Integrated Biomedical Sciences Program.

Helton, Minus

Major:
Biomedical Sciences
Faculty Mentor:
Kurt Gibbs
Research/Project Title:
Expression Profiling of miR-133b after Spinal Cord Injury in Xenopus Laevis Tadpoles and Adult Frogs
Project Abstract/Summary:
MicroRNAs (miRNAs) post-transcriptionally regulate gene expression, showing strong conservation of function from round worms to mammals. Previous work in zebra fish, a species that can regenerate its spinal cord into adulthood, showed that miR-133b played an important role in spinal cord regeneration after injury. Xenopus laevis tadpoles have the ability to regenerate their spinal cords, but lose this ability to do so after metamorphosis. In our study, we used quantitative real-time polymerase chain reaction (qRT-PCR) to determine the expression of miR-133b in spinal cord injured tadpoles and adult frogs. We compared the relative expression of miR-133b at various time points after injury to determine if the expression of miR-133b can be correlated with the developmental decline in spinal cord regenerative capacity. Data from qRT-PCR showed that in the tadpole, the operated samples showed the same amount of miR-133b expression as the un-operated samples after injury. qRT-PCR data for the adult frogs showed

that the expression of miR-133b was higher in the un-operated samples than in the operated samples after injury. These data indicate that miR-133b levels decline after injury in the adult frogs, suggesting a decline in miR-133b expression with progressing development. Future experiments to uncover the mechanism that allows tadpoles to maintain miR-133b levels after injury and regenerate their spinal cord may help to guide efforts to develop therapeutic strategies in humans.

Project Dissemination:

Poster Presentation:

Helton, Minus R. and Kurt M. Gibbs (2013, April). Expression Profiling of miR-133b after Spinal Cord Injury in Xenopus Laevis Tadpoles and Adult Frogs, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Hunter, Tiffany

Major:

Biology/Environmental Science

Faculty Mentor:

Sean O'Keefe

Research/Project Title:

Effects of Yellow Pan Trap Color in Assessment of Beetle Diversity in Daniel Boone National Forest

Project Abstract/Summary:

Biodiversity is a fundamental assessment for conservation purposes. Beetles are an ideal group to use for biodiversity assessments because they are extremely diverse, very abundant, fill numerous ecological roles, can be assessed quantitatively and qualitatively via many means, and are relatively easy and inexpensive to collect. The purpose of this study was to test the effectiveness of using yellow pan traps to sample a wide variety of beetles. Yellow pan traps have often been used for sampling flies and wasps, but rarely for beetles. Sampling was conducted at three study sites in the Daniel Boone National Forest during the summer and fall of 2012. As of now, more than 800 specimens from this period have been prepared for assessment. Diversity indices show slightly better diversity in yellow pan traps. Each class only has one very abundant species and several relatively abundant species. Yellow pan traps collected more unique genera and species than brown pan traps.

Project Dissemination:

Poster Presentation:

Hunter, T., B. Wulker, and S. O'Keefe (2013, April). Effects of Yellow Pan Trap Color in Assessment of Beetle Diversity in Daniel Boone National Forest, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Accepted in MS Biology and also in MS IRAPP at Morehead State University.

Kamelgarn, Marisa

Major:

Biology

Faculty Mentor:

Geoff Gearner

Research/Project Title:

PCR Detection of Antibiotic Resistance Genes in DNA Extracted Directly from Stream Samples

Project Abstract/Summary:

Previous work in our laboratory demonstrated that antibiotic resistance genes (ARG) can be detected in isolates of the bacterium Escherichia coli (an indicator of fecal pollution) collected from stream samples using the polymerase chain reaction (PCR). In this project, we wanted to know if the PCR could amplify ARG sequences from DNA extracted directly from stream water samples. Samples were collected from a variety of established collecting sites in the Triplett Creek Watershed, and total DNA was extracted using a commercial kit. Primers specific for the ARGs

ereA, sul-I, msrA/B, and tetO were used in PCR. PCR products were assessed by agarose gel electrophoresis. ARGs were detected in some of the samples, indicating that the method does work. ARGs have the potential to be utilized as not only indicators of fecal contamination, but also in microbial source tracking efforts that can determine the host and point sources of fecal pollution in watersheds.

Project Dissemination:

Poster Presentation:

Kamelgarn, M., K. Reed, N. Whitt, and G.W. Gearner (2013, April). PCR Detection of Antibiotic Resistance Genes in DNA Extracted Directly from Stream Samples, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Accepted to the Integrated Biomedical Sciences PhD program at the University of Kentucky. Will start August 2013.

McClanahan, Sarah

Major:

Biology/Environmental Science

Faculty Mentor:

Michael Fultz

Research/Project Title:

Effect of Rho Kinase Inhibition on the Alpha-Actin and Beta-Actin Cytoskeleton in the A7r5 Smooth Muscle Cell

Project Abstract/Summary:

It has been suggested that differential remodeling of the alpha- and beta- actin cytoskeleton may explain the unique contractile properties exhibited by smooth muscle. However, the molecular mechanism(s) regulating this remodeling are not understood. The goal of this project was to test the hypothesis that inhibition of Rho kinase would alter remodeling of the alpha- and beta- actin cytoskeleton in A7r5 smooth muscle cells. Preliminary studies indicate that cells treated with the specific rho kinase inhibitor Y-27632 before and after stimulation with PDBu demonstrate the inability to undergo alpha-actin remodeling. In addition, resting A7r5 cells exposed to Y-27632 demonstrated a drastic disruption of the alpha-actin cytoskeleton. Interestingly, beta-actin appears to be less susceptible to disruption by rho kinase inhibition. This implicates a critical role of Rho kinase in alpha-actin dynamics in smooth muscle and supports the model of differential actin isoform remodeling.

Project Dissemination:

Poster Presentations:

McClanahan, Sarah and Fultz, Michael (2013, April). Effect of Rho Kinase Inhibition on the Alpha-Actin and Beta-Actin Cytoskeleton in the A7r5 Smooth Muscle Cell, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

McClanahan, Sarah (2013). Effect of Rho Kinase Inhibition on the Alpha-Actin and Beta-Actin Cytoskeleton in the A7r5 Smooth Muscle Cell, Kentucky Academy of Science.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

McKinley, Zak

Major:

Biology/Environmental Science

Faculty Mentor:

Sean O'Keefe

Research/Project Title:

Diversity of Arachnids Caught in Yellow and Brown Pan Traps in Eastern Kentucky

Project Abstract/Summary:

Arachnids (spiders, ticks, scorpions, mites, harvestmen, etc) are extremely diverse, and in some habitats can be extremely abundant. This diversity and abundance can be very useful as a tool to measure biodiversity. However, their diversity typically is poorly known. An inventory of Opiliones (harvestmen) and Araneae (spiders) is being conducted in the Daniel Boone National Forest. Although the typical method of inventorying spiders is hand-picking or pitfall traps, pan traps appear not to be used to survey spider diversity. Pan traps appear to be a very efficient

way to collect cursorial spiders, and are easier to implement than pitfall traps (particularly in hard, heavily-rooted soil). The most common spider families collected were Lycosidae (wolf spiders), Dictynideae, Zoridae, and Pisuridae (nursery web spiders). These are predominantly active ground hunters; which would have had a greater chance of appearing in pan traps. Distinctly absent are the arboreal spiders (orb weavers, crab spiders, etc). Additional techniques to survey arboreal spiders are planned to be included in the 2013 sampling season.

Project Dissemination:

Poster Presentation:

Zachary McKinley and Sean O'Keefe (2013, April). Diversity of Arachnids Caught in Yellow and Brown Pan Traps in Eastern Kentucky, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Modaff, Kelly

Major:

Biology

Faculty Mentor:

Allen Risk

Research/Project Title:

Vascular Plant Inventory of the Rowan County Sphagnum Swamp, Farmers, Kentucky

Project Abstract/Summary:

The Rowan County Sphagnum Swamp (RCSS), an uncommon bottomland swamp forest, is situated slightly north of Green Mountain in western Rowan County. The site has standing water from November to June and is underlain by Middle Silurian Estill Shale topped by Quaternary alluvium. RCSS is within the Licking River floodplain and is comprised of 22 mostly forested acres and a pipeline right-of-way. Topographically, the area exhibits a gradual down-hill slope from east to west. The purpose of this study (funded by the Kentucky Society of Natural History) is to generate a specimen-based vouchered list of the plants currently present in this rare plant community and will also include specimens collected by previous researchers. On the basis of numerous field trips to the site and examination of the MSU Herbarium, thus far 99 species have been documented. Field work will continue through the summer and the fall of 2013 to complete the study.

Project Dissemination:

Oral Presentation:

Modaff, Kelly L. and Allen C. Risk (2013, April). Vascular Plant Inventory of the Rowan County Sphgnum Swamp, Farmers, Kentucky, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Plan to attend Graduate school, the specific one is not decided yet.

Pyles, Lacee

Major:

Physics

Faculty Mentor:

Allen C. Risk

Research/Project Title:

Comparisons of Beta Diversity of Woody Plant Communities in Two Eastern Kentucky State Parks

Project Abstract/Summary:

Beta diversity has been defined as the variation in species composition among sites in a geographic area. Beta diversity is an important concept for ecosystem management, conservation of biodiversity and for understanding the function of ecosystems. There are multiple ways to determine the beta diversity of an area using different functions of alpha and gamma diversity. In order to better understand the differences in species richness and varying sizes of Carter Caves and Greenbo Lake State Resort Park, six different mathematical approaches for calculating beta

diversity were applied to two 1000m2 plots in both parks, south-facing upper and north-facing lower plots. The average beta diversity for Carter Caves was 0.22780, by comparison the value for Greenbo Lake was 0.14787. This difference for these parks is consistent with ongoing woody plant inventories for both parks that show Carter Caves to be the more botanically diverse park, in spite of being smaller than Greenbo by about 400 hectares. The greater geological heterogeneity of Carter Caves is likely the basis for the disparity. This research was supported by the MSU Undergraduate Research Fellowship Program.

Project Dissemination:

Oral Presentation:

Pyles, Lacee and Allen C. Risk (2013, April). Beta Diversity Comparisons of Woody Plant Species Richness in Two Eastern Kentucky State Parks, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Plans to graduate in Fall 2013

Rasp, Benjamin C.

Major:

Biological Science

Faculty Mentor:

Allen C. Risk

Research/Project Title:

Dendroclimatological Comparison of Red Maple and White Oak, Eagle Lake, Morehead, KY.

Project Abstract/Summary:

Trees respond to their surroundings and thus are affected by climatic variation. Dendroclimatology is a science that examines the relationship between climate and tree growth. The primary objective of this study was to determine the correlations between climatic variables and the standardized annual ring widths of Quercus alba (white oak) and Acer rubrum (red maple). In this study, 32 samples were taken from 16 Q. alba and 28 samples were taken from 15 A. rubrum from a 1000 m2 plot near Evans Branch upstream of Eagle Lake. The results showed that Palmer Drought Severity Index had the strongest relationship among the climatic variables to the standardized annual ring widths of Q. alba during the summer months. The results also showed temperature had the strongest relationship with A rubrum, though the relationship was slightly significant. This research was supported by the MSU Honors Program Undergraduate Research Fellowship.

Project Dissemination:

Oral Presentation:

Rasp, Benjamin C. and Risk, Allen C. (2013, April). Dendroclimatological Comparison of Red Maple and White Oak, Eagle Lake, Morehead, KY, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Reed, Kasey

Major:

Biology

Faculty Mentor:

Geoff Gearner

Research/Project Title:

PCR Detection of Antibiotic Resistance Genes in DNA Extracted Directly from Stream Samples

Project Abstract/Summary:

Previous work in our laboratory demonstrated that antibiotic resistance genes (ARG) can be detected in isolates of the bacterium Escherichia coli (an indicator of fecal pollution) collected from stream samples using the polymerase chain reaction (PCR). In this project, we wanted to know if the PCR could amplify ARG sequences from DNA extracted directly from stream water samples. Samples were collected from a variety of established collecting sites in the Triplett Creek Watershed, and total DNA was extracted using a commercial kit. Primers specific for the ARGs ereA, sul-I, msrA/B, and tetO were used in PCR. PCR products were assessed by agarose gel electrophoresis.

ARGs were detected in some of the samples, but also in microbial source tracking efforts that can determine the host and point sources of fecal pollution in watersheds. Kasey worked as part of a team that included two other URF students (Marisa Kamelgarn and Natasha Whitt). Kasey worked for 2 semesters in the lab as an Honors student URF, and this past semester (Spring 2013) as a volunteer URF. She has submitted an application to work as a paid URF for Academic Year 2013-14.

Project Dissemination:

Poster Presentations:

Kamelgarn, M., K. Reed, N.Whitt, and G.W. Gearner (2013, April). PCR Detection of Antibiotic Resistance Genes in DNA Extracted Directly from Stream Samples. Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Kasey will enter her 4th and last year at Morehead State. She plans to apply to medical school.

Renyer, Kathryn

Major:

Chemistry

Faculty Mentor:

Ann Macintosh

Research/Project Title:

Trends in Cobalt Leaching from Coal Combustion By-products from Two Stoker Boilers Pre- and Post- Modernization

Project Abstract/Summary:

The amount of cobalt that can leach from coal combustion by-products (CCBs) in an acid environment was quantified in order to help determine the risks of using and disposing of CCBs. The samples of the CCBs and feed coal were gathered from multiple points along the two post-modernized stoker boiler systems on the MSU campus. The extraction prodcedure was carried out in nitric acid and the cobalt concentration was determined using inductively coupled plasma - atomic emission spectrometry. It was determined that the concentrations of the cobalt ion leaching off in the acid environment were well below toxic levels for humans. The data contributes to the literature due to a lack of information regarding CCBs of stoker boilers. This work was funded by an USGS NCRDS grant.

Project Dissemination:

Poster Presentations:

Renyer, Kathryn M., Barnes, Zexia K., Coker, Nathan L., Macintosh, Ann M. and O'Keefe, Jennifer M. (2013, April). Trends in Cobalt Leaching from Coal Combustion By-products from Two Stoker Boilers Pre- and Post-Modernization, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Cantrell, Micheal B., Renyer, Kathryn M., Barnes, Zexia K., Coker, Nathan L., Macintosh, Ann M., and O'Keefe, Jennifer M. (2013, April) Trends in Cobalt and Manganese Leaching Form Coal Combustion By-products from Two Stoker Boilers Pre- and Post-Modernization, The American Chemical Society's 245th Annual National Meeting, New Orleans, LA, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Roberts, Rebecca

Major:

Biology/Environmental Science

Faculty Mentor:

Sean O'Keefe

Research/Project Title:

Effectiveness of Trapping Method in Relation to Functional Feeding Group for Beetles

Project Abstract/Summary:

Biodiversity assessments are an indispensable tool for conservation evaluation. Beetles in particular are an ideal group to use for such assessments as they are extremely diverse, very abundant, fill numerous ecological roles, and can be assessed quantitatively and qualitatively via many means. One useful way to categorize insects is via functional feeding groups. This method categorizes groups of insects according to mechanisms for acquiring food, as opposed to taxonomic grouping which seeks to provide a name for each individual insect and is thus more cumbersome. This approach can also provide some insight into food availability and quality of the study site. Examples of functional feeding groups include predators, herbivores, detritivores, scatophages, necrophages, and fungivores. Three rounds of sampling were conducted at three Wolf Penn Sites in the Daniel Boone National forest. Our pilot study lasted from 10 – 26 Aug 2011, and two additional sampling sessions were from 18 May – 14 June 2012 and 19 July – 14 Aug 2012. The three trapping methods employed include; yellow pan traps, pitfall traps, and Lindgren funnel traps.

Project Dissemination:

Poster Presentations:

Rebecca Roberts, Jackie Carder, and Sean O'Keefe (2012). Beetles as a Tool for Conversation: Preliminary Assessment of Beetle Diversity at Wolf Penn Sites in the Daniel Boone National Forest, Kentucky Academy of Science 2012 Annual Meeting.

Rebecca Roberts, Jackie Carder, and Sean O'Keefe (2013, April). Beetles as a Tool for Conversation: Preliminary Assessment of Beetle Diversity at Wolf Penn Sites in the Daniel Boone National Forest, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Will begin MS program at EKU in August.

Ruth, Ashley

Major:

Veterinary Technology

Faculty Mentor:

Sean O'Keefe

Research/Project Title:

Field Guide to the Medically Important Insects and Arachnids of Rowan County, Kentucky

Project Abstract/Summary:

The large abundance of insects and arachnids throughout the globe make them easy to encounter on a daily basis. They are of great importance to doctors and veterinarians due to the pathogens, toxins, and other parasites they are capable of transmitting. Arthropods of medical importance include mosquitoes, fleas, lice, bedbugs, biting flies, horse flies, myasis flies, bees and wasps, spiders, ticks, mites, etc. Of these, ticks and spiders are very common in Rowan County. Ticks are capable of transmitting Lyme Disease, Rocky Mountain Spotted Fever, as well as causing a variety of other problems. Spiders, a common arachnid, are medically important because of the toxins some species can transmit. The majority of our initial research focused on the arachnids, such as ticks and spiders, due to the availability of specimens. The American dog tick, Dermacentor variabilis, is the most commonly encountered tick. The Lone Star tick and the brown dog tick are also represented. The southern black widow spider, Latrodectus mectans, is fairly common, but the brown recluse spider, Loxosceles reclusa, appears to be fairly rare. This project was set up to document the medically important insects and arachnids in Rowan County, and eventually will include all of Eastern Kentucky.

P**roject Dissemination:**

Poster Presentation:

Ashley Ruth and Dr. Sean O'Keefe (2013, April). Field Guide to the Medically Important Insects and Arachnids of Rowan County, Kentucky, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Webb, Mary

Major:

Biology

Faculty Mentor:

Allen Risk

Research/Project Title:

Herbaceous Plant Species Floristic Inventory of Carter Caves State Resort Park, Carter County, KY

Project Abstract/Summary:

Carter Caves State Resort Park, located in north-central Carter County and established in 1946, covers over 2,000 acres and is rich in geological features. The geology of the park is dominated by sandstone and limestone and includes caves, sinkholes, natural bridges, box canyons, deep gorges, steep-sided cliffs, and rock houses. An ongoing assessment of the Morehead State University Herbarium for examples of herbaceous angiosperms from the park has so far produced 113 specimens of 94 different species. Specimens will be collected in the spring and fall semesters from the park to further the inventorying process.

P**roject Dissemination:**

Poster Presentation:

Webb, Mary and Risk, Allen C. (2013, April). Herbaceous Plant Species Floristic Inventory of Carter Caves State Resort Park, Carter County, KY, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

NA

Post-Graduation Plans (Seniors only):

N/A

Whitt, Natasha

Major:

Biology

Faculty Mentor:

Geoffrey Gearner

Research/Project Title:

PCR Detection of Antibiotic Resistance Genes in DNA Extracted Directly from Stream Samples

Project Abstract/Summary:

Previous work in our laboratory demonstrated that antibiotic resistance genes (ARG) can be detected in isolates of the bacterium Escherichia coli (an indicator of fecal pollution) collected from stream samples using the polymerase chain reaction (PCR). In this project, we wanted to know if the PCR could amplify ARG sequences from DNA extracted directly from stream water samples. Samples were collected from a variety of established collecting sites in the Triplett Creek Watershed, and total DNA was extracted using a commercial kit. Primers specific for the ARGs, ereA, sul-I, msrA/B, and tet) were used in PCR. PCR products were assessed by agarose gel electrophoresis. ARGs were detected in some of the samples, indicating that the method does work. ARGs have the potential to be utilized as not only indicators of fecal contamination, but also in microbial source tracking efforts that can determine the host and point sources of fecal pollution in watersheds. Natasha worked as part of a team that included two other URF students (Marisa Kamelgarn and Kasey Reed). Natasha worked for 2 semesters in the lab as an Honors student URF, and this past semester (Spring 2013) as a volunteer URF. When compared to the other URFs, Natasha played a limited role in the lab during the Spring 2013 semester as she was busy with other co-curricular activities.

Project Dissemination:

Poster Presentation:

Kamelgarn, M., K. Reed, N. Whitt, and G.W. Gearner (2013, April). PCR Detection of Antibiotic Resistance Genes in DNA Extracted Directly from Stream Samples. Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

NA

Post-Graduation Plans (Seniors only):

Natasha will enter her 3rd year at Morehead State. She plans to apply to medical school.

Wilhoite, Andrea

Major:
Mathematics
Faculty Mentor:
Zexia Barnes
Research/Project Title:
Analysis of Nickel in a Basic Environment from Combustible Coal By-products Using ICP-OES
Project Abstract/Summary:
Combustible coal by-products (CCBs) are non-combustible materials left over from burning coal. CCBs are often used in building materials and concrete. Leachability of heavy metals from these may depend on the pH concentrations of the environment, which could pose a serious health hazard if these metals are leaching off in high concentrations. In this research study, CCBs were added to a basic solution of a known concentration of potassium hydroxide. This new solution was then analyzed for nickel using inductively coupled plasma optical emission spectrometry, and the results showed that the nickel concentrations were below the detection limit of the ICP. This suggests that nickel does not leach off of CCBs in a concentration that is hazerdous to the public, as the EPA safety standards for nickel concentration in drinking water are 20 µg/l.
Project Dissemination:
Poster Presentation:
Wilhoite, Andrea (2013, April) Analysis of Nickel in a Basic Environment from Combustible Coal By-Products Using ICP-OES, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.
Awards and/or Honors:
N/A
Post-Graduation Plans (Seniors only):
N/A

Williams, Alexandria S.

Major:
Biology
Faculty Mentor:
Matthew Ellison
Research/Project Title:
The Role of AmgRS in Zinc Susceptibility and Virulence in the Opportunistic Bacterial Pathogen Pseudomonas Aeruginosa
Project Abstract/Summary:
Pseudomonas aeruginosa is a ubiquitious pathogen that causes disease in immuno compromised humans. We recently discovered that the genes which encode AmgR and AmgS control antibiotic resistance and sensitivity to high zinc in this important pathogen. To further investigate this finding, Alex constructed a mutant strain, PASW-ΔAmgRS and found that this mutant is more susceptible to high zinc. She is further exploring the mechanism by which this two-component system is involved with zinc homeostasis, virulence, and antibiotic resistance.
Project Dissemination:
Poster Presentation:
Alexandria S. Williams and Dr. Matthew L. Ellison (2013, April). Generation of an Isogenic amgRS Mutant in the Opportunistic Pathogen Pseudomonas Aeruginosa, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.
Awards and/or Honors:
N/A
Post-Graduation Plans (Seniors only):
N/A

Witkowski, Travis

Major:
Biomedical Science
Faculty Mentor:
Janelle Hare

Research/Project Title:

Construction of UmuDAb Mutants of Acinetobacter Baylyi and Acinetobacter Baumannii to Determine the Roles of the N and C Termini in UmuDAb Gene Regulation

Project Abstract/Summary:

Travis gathered constructed insertions into DNA damage induced genes to allow the measurement of their expression after DNA damage. He then used these plasmid constructs to create bacterial strains for use in the planned experiments. A new assay was used and now is working well in the laboratory; expression levels of three target genes were measured. This work will continue as more strains are made.

Project Dissemination:

Poster Presentations:

Witkowski, T., Grice, A., and J.M. Hare (2012). Discovering if DNA Polymerase IV or V Causes Rifampin Resistance in the rpoB Gene of Acinetobacter Strains, Kentucky Academy of Sciences General Meeting, Richmond, KY.

Witkowski, T., Grice, A., and J.M. Hare (2012, April). Discovering if DNA Polymerase IV or V Causes Rifampin Resistance in the rpoB Gene of Acinetobacter Strains, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Witkowski, T., Alison N. Grice, and Janelle Hare. (2013). Profiles of Rifampin-resistant Mutants after UV Exposure Demonstrate Different Error Prone DNA Polymerases at Work in Acinetobacter Baumannii and Acinetobacter Ursingii after DNA Damage. To be presented at the 9th International Symposium on the Biology of Acinetobacter, Cologne, Germany.

Awards and/or Honors:

2nd Place Oral Presentation, Kentucky Academy of Science Meeting, Richmond, KY, November.

Post-Graduation Plans (Seniors only):

N/A

Wulker, Brian

Major:

Biology/Environmental Science

Faculty Mentor:

Sean O'Keefe

Research/Project Title:

Effects of Yellow Pan Trap Color in Assessment of Beetle Diversity in Daniel Boone National Forest

Project Abstract/Summary:

Biodiversity is a fundamental assessment for conservation purposes. Beetles are an ideal group to use for biodiversity assessments because they are extremely diverse, very abundant, fill numerous ecological roles, can be assessed quantitatively and qualitatively via many means, and are relatively easy and inexpensive to collect. The purpose of this study was to test the effectiveness of using yellow pan traps to sample a wide variety of beetles. Yellow pan traps have often been used for sampling flies and wasps, but rarely for beetles. Sampling was conducted at three study sites in the Daniel Boone National Forest during the summer and fall of 2012. As of now, more than 800 specimens from this period have been prepared for assessment. Diversity indices show slightly better diversity in yellow pan traps. Each class only has one very abundant species and several relatively abundant species. Yellow pan traps collected more unique genera and specials than brown pan traps.

Project Dissemination:

Poster Presentation:

Hunter, T., B. Wulker, and S. O'Keefe (2013, April). Effects of Yellow Pan Trap Color in Assessment of Beetle Diversity in Daniel Boone National Forest, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Student accepted to the MS Biology program at MSU.

DEPARTMENT OF EARTH AND SPACE SCIENCES

Boyd, Ashley

Major:
Geology

Faculty Mentor:
Charles Mason

Research/Project Title:
The Diversity and Abundance of the Dysaerobic Macro-Invertebrate and Vertebrate Fauna from the Jacobs Chapel Shale (Lower Mississippian) of Rowan County, Kentucky

Project Abstract/Summary:
At least 100kg of samples will be collected from exposures of the Jacobs Chapel Shale in Rowan County, Kentucky (especially those exposed behind the new Walmart) and processed in the lab. The samples will first be dried in ovens and then weighted. Next, the samples will be disaggregrated and then washed through a number twenty mesh sieve. The residue caught on the number twenty sieve will be dried in an oven. The residues will then be examined under a binocular microscope and the macroinvertebrate and vertebrate fossils encountered will be picked and placed in separate containers. The picked fossils will then be identified and sorted. The diversity and abundance of the macroinvertebrates and vertebrates of the Jacobs Chapel Shale will then be tabulated and recorded. The microinvertebrates will be caught on the number 100 sieve. The residues caught on the #100 sieve will be examined as above but counted seperately.

Project Dissemination:

Oral Presentation:
Boyd, Ashley, Philips, Tony Nelson, Mason, Charles (2012, April). The Faunal Age and Abundance of the Jacobs Chapel Shale in the Morehead, Kentucky Area, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:
N/A

Post-Graduation Plans (Seniors only):
N/A

Collins, Justin

Major:
Geology

Faculty Mentor:
Jen O'Keefe

Research/Project Title:
Palynology of Claiborne Lignite, Western Tennessee

Project Abstract/Summary:
Mr. Collins began volunteering with this project in late Fall 2013. Since then he has become adept at using the microscopes and telling palynomorphs from remnant cellular debris. When the opportunity arose for him to receive a half-semester Undergraduate Research Fellowship, he jumped at the opportunity and rapidly learned how to identify palynomorphs and is somewhat more slowly becoming conversant in what all of these different forms mean. He is developing good pace in counting.

Project Dissemination:
N/A – Officially joined project after abstracts were due for the Celebration of Student Scholarship

Awards and/or Honors:
N/A

Post-Graduation Plans (Seniors only):
N/A

Dang, Kien

Major:
Space Science

Faculty Mentor:
Kevin Brown

Research/Project Title:
Development of an Advanced Electrical Power System (EPS) for CubeSat Class Satellites

Project Abstract/Summary:

Electricity powers every single sattellite. The power source can be either solar photovoltaic solar thermal dynamic, radiosotopic generators, fuel cells or nuclear power, but eventually it must be converted to electricity to run other systems operating within a satellite. That is the job of Electrical Power System (EPS). For a CubeSat class satellite, an EPS must be versatile enough to satisfy all power requirements, clever enough to protect the batteries and other systems in under-powered, over-powered, or confusion situations, fault tolerant enough in the radiation environment of space, and small enough to fit inside a nanosatellite. Our group at the Space Science Center is developing an advanced EPS, including hardware and software systems, with all these functions. This project involves the design, fabrication and testing of a next-generation EPS for the cubesat form factor.

Project Dissemination:

Dang, Kien T., Molton, Brandon L., Brown, Kevin Z., Malphrus, Benjamin K., (2013, April). Electrical Power Systems (EPS) for CubeSat Class Satellite, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Dang, Kien T., Molton, Brandon L. (2012, October). Morehead State University Electrical Power System (EPS) for Cubesat, 98th Annual Kentucky Academy of Science Meeting, Richmond, KY, October.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

DeMoss, Cara

Major:

Biology

Faculty Mentor:

Benjamin Malphrus

Research/Project Title:

GLIOLAB: Development of a Platform for ISS CubeLab-based Biomedical Missions

Project Abstract/Summary:

GlioLab is a joint project between Morehead State University, GAUSS-Group of Astrodynamics of the University of Roma, Kentucky Space and the NASA Ames Research Center that involves the development of a 2U CubeLab (GlioLab). The primary objectives of the project are to develop a CubeLab platform for performing biomedical research on the International Space Station (ISS), and to perform preliminary ground-based and flight experimentation (STS-134 and STS-135) that will help drive the development of GlioLab. The platform will incorporate a liquid mixing apparatus that will allow 2-3 liquids to be mixed and require the development of various additional subsystems to support biological specimens for varying lengths of time while aboard ISS. An automated system will control the injection/mixing of liquids in user-specified ratios and at user-specified times. The platform will utilize small fluid amounts (≤10 ml), which will be exposed to microgravity for a specified length of time and then returned to Earth for analysis. A set of mission profiles have been designed based on available ascent and decent vehicles along with the current mechanisms and logistics related to access to the ISS NanoRacks System. These mission profiles will be used to direct the accompanying ground based research utilizing the Glioblastoma cancer line as its experimental model. The potential for biomedical research utilizing Gliolab onboard the ISS or space flights in general will pave the way for future affordable biomedical research in microgravity and hopefully yield new terrestrial biomedical applications and treatments.

STS-134

RNA quantitation by colleagues at the University of Rome revealed too little RNA (10ng) for gene expression analysis.

STS-135

DNA agarose gel analysis by colleagues at the University of Rome revealed complete DNA fragmentation of the specimen exposed to microgravity while gravitational controls were normal. Due to the nucleic acid degradation gene expression analysis was once again impossible. The LMA containing the live culture of glioblastoma was tested for viability upon down-mass return, sub cultured and transported back to Morehead State University. Trypan blue exclusion revealed at 75% decrease in cell viability following two weeks exposure to microgravity. Though some cells excluded trypan blue, suggesting that they were viable, their morphology was created. These cells were monitored daily for attachment and cell division, however none of these cells survived. It is our opinion that the cells characterized as living following reentry were in the early stages of apoptosis. Due to the nature of the DMEM-F12 media used, as cells metabolize the nutrients in the media the pH is altered and is visualized by a nature color

change (dark pink to pink to orange to yellow). The LMA containing the live culture of glioblastoma exhibited a change from dark pink to light pink. This observation indicates that the cells were metabolizing and most probably undergoing mitosis while initially in microgravity. At some point the cells apparently started dying due to the exposure to microgravity or ionizing radiation. We do not believe this to have been to the media, CO2 concentration or temperature based on ground experimentation.

Project Dissemination:

N/A

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Ms. DeMoss will graduate in the Fall of 2013 after completing a Bachelor's Degree in Biology Teaching. Her plans are to teach high school Biology, specifically Anatomy and Physiology.

Dutton, Kurstie

Major:

Geology

Faculty Mentor:

Jen O'Keefe

Research/Project Title:

Palynology of Claiborne Lignite, Western Tennessee

Project Abstract/Summary:

This project allowed Ms. Dutton to learn palynology skills and to grow as a researcher and a person. She has more faith in her own abilities and has demonstrated to herself that she can learn a subject well, even if on her own. She successfully mastered the art of recognizing palynomorphs and has learned how to identify different grains using morphology. Her counting speed is coming along, and she exhibits immense curiousity about what all of the different things she is finding mean in terms of depositional environment and paleoclimate. Because the study is unfinished, she gave a presentation at the Celebration of Student Scholarship on her experiences and what she has gained from the project, which was a very brave thing to do in the midst of many hard science presentations. Ms. Dutton has successfully laid the foundation for her summer URA work and for continunig as an Undergraduate Research Fellow in the next school year.

Project Dissemination:

Poster Presentation:

Dutton, K.R., O'Keefe, J., (2013, April). Adventures in Becoming an Independent Researcher: A Case Study in Palynology, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Grey, William

Major:

Biology

Faculty Mentor:

Benjamin Malphrus

Research/Project Title:

GLIOLAB: Development of a Platform for ISS CubeLab-based Biomedical Missions

Project Abstract/Summary:

GlioLab is a joint project between Morehead State University, GAUSS-Group of Astrodynamics of the University of Roma, Kentucky Space and the NASA Ames Research Center that involves the development of a 2U CubeLab (GlioLab). The primary objectives of the project are to develop a CubeLab platform for performing biomedical research on the International Space Station (ISS), and to perform preliminary ground-based and flight experimentation (STS-134 and STS-135) that will help drive the development of GlioLab. The platform will incorporate a liquid mixing apparatus that will allow 2-3 liquids to be mixed and require the development of various additional subsystems to support biological specimens for varying lengths of time while aboard ISS. An automated system will control the injection/mixing of liquids in user-specified ratios and at user-specified times. The platform will utilize small fluid amounts (≤10 ml), which will be exposed to microgravity for a specified length of time and then returned to Earth for analysis. A set of mission profiles have been designed based on available ascent and decent

vehicles along with the current mechanisms and logistics related to access to the ISS NanoRacks System. These mission profiles will be used to direct the accompanying ground based research utilizing the Glioblastoma cancer line as its experimental model. The potential for biomedical research utilizing Gliolab onboard the ISS or space flights in general will pave the way for future affordable biomedical research in microgravity and hopefully yield new terrestrial biomedical applications and treatments.

STS-134

RNA quantitation by colleagues at the University of Rome revealed too little RNA (10ng) for gene expression analysis.

STS-135

DNA agarose gel analysis by colleagues at the University of Rome revealed complete DNA fragmentation of the specimen exposed to microgravity while gravitational controls were normal. Due to the nucleic acid degradation gene expression analysis was once again impossible. The LMA containing the live culture of glioblastoma was tested for viability upon down-mass return, sub cultured and transported back to Morehead State University. Trypan blue exclusion revealed a 75% decrease in cell viability following two weeks exposure to microgravity. Though some cells excluded trypan blue, suggesting that they were viable, their morphology was created. These cells were monitored daily for attachment and cell division, however none of these cells survived. It is our opinion that the cells characterized as living following reentry were in the early stages of apoptosis. Due to the nature of the DMEM-F12 media used, as cells metabolize the nutrients in the media the pH is altered and is visualized by a natural color change (dark pink to pink to orange to yellow). The LMA containing the live culture of glioblastoma exhibited a change from dark pink to light pink. This observation indicates that the cells were metabolizing and most probably undergoing mitosis while initially in microgravity. At some point the cells apparently started dying due to the exposure to microgravity or ionizing radiation. We do not believe this to have been to the media, CO2 concentration or temperature based on ground experimentation.

Project Dissemination:

N/A

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Mr. Grey completed his Bachelor's Degree in the new Area of Concentration in Biomedical Sciences in the Spring of 2013 and he will be attending Medical School in Pikeville in the Fall of 2013.

Healea, Jordan

Major:

Space Science

Faculty Mentor:

Robert Twiggs

Research/Project Title:

PocketQube: The Smallest Satellite Ever To Be Flown In Space

Project Abstract/Summary:

As technology advances all the devices that surround us become smaller; yet more capable. In the space industry this holds true as well. Due to the innovative designes of emerging technology, what once took the space of a car can now be compacted into something the size of its horn, and the PocketQube will do just that. The PocketQube was invented by Professor Bob Twiggs in 2010 as a follow-on to the CubeSat, pushing the envelope of small satellites. PocketQubs are 5 cm x 5 cm x 12.5 and have a mas under 0.25 kg. A team of students and faculty at the Morehead State University Space Science Center are developing one of the first PocketQubes – Eagle 1. The approach taken on designing the payload for the PocketQube is to integrate a circuit with the Picaxe processor. The circuitry will contain components that will measure values such as: battery current, battery voltage, on board temperature, and external temperature. Once these values have been obtained by the PocketQube it will then transmit the values to a ground station using Morse code. Eagle 1 is scheduled for launch on a Dneper Rocket from Russia in 2012.

Project Dissemination:

Healea, Jordan, Mays, David, Grindrod, Jennafer, Malphrus, Benjamin, Twiggs, Robert (2013, April). MSU's First Femto-class Satellite: BeakerSat-1, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Healea, Jordan, Grindrod, Jennafer, Byeleborodov, Yevgeniy, Mays, David (2012, October). BeakerSat-1: A PocketQube FemtoSatellite, 98th Annual Kentucky Academy of Science Meeting, Richmond, KY, October.

Awards and/or Honors:

Certificate of Merit, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April

Post-Graduation Plans (Seniors only):

N/A

Mabry, Hannah

Major:

Space Science

Faculty Mentor:

Jeff Kruth

Research/Project Title:

Development and Implementation of a Precise Pulsar Timing Instrument for the 21M Space Tracking Antenna

Project Abstract/Summary:

The primary objective of this undergraduate research project is to define, design, implement, test and operationalize a Pulsar Timer for the 21 M antenna. To complete this long-term program will required the student to develop an understanding of RF systems, radiation physics, radio astronomy instrumentation, radiative mechanisms, and the physics of astronomical phenomena. The student will perform needed tradeoff analyses in order to create a design for a pulsar timing instrument. Using this information and data, a physical implementation will be built and tested. Once performance is verified, this instrument will be used with the 21M Radio Telescope, allowing the student to continue the research she began using the National Radio Astronomy Observatory instruments at Morehead State University.

Project Dissemination:

Mabry, Hannah C., Pannuti, Thomas, Kruth, Jeff (Morehead State University), Carter, Jennifer (Rowan County Senior High School0, and Rosen, Rachel (West Virginia University) (2012, October). Discovery of a Previously Unknown Millisecond Pulsar, 98th Annual Kentucky Academy of Science Meeting, Richmond, KY, October.

Awards and/or Honors:

Mabry, Hannah C., Pannuti, Thomas, Kruth, Jeff (Morehead State University), Carter, Jennifer (Rowan County Senior High School), and Rosen, Rachel (West Virginia University) (2012, October). Discovery of a Previously Unknown Millisecond Pulsar, Second Place, 98th Annual Kentucky Academy of Science Meeting, Richmond, KY, October.

Post-Graduation Plans (Seniors only):

N/A

Moffitt, William

Major:

Physics

Faculty Mentor:

Thomas Pannuti

Research/Project Title:

An Analysis of Archival Chandra X-ray Observations of Blazars

Project Abstract/Summary:

Active Galactic Nuclei (AGNs) have attracted a considerable amount of attention in modern astrophysics from both observational and theoretical perspectives. Much of the research on these sources concentrates on the details of the relationship between the supermassive black holes located at the centers of galaxies and the generation of jets of enormously energetic particles seen to emanate from these sources. The particular class of AGNs known as blazars are distinguished by an observed inclination angle where the observer may see the “central engine” without obscuration: studies of blazars, therefore, hold the promise of revealing properties of these sources without the shroud of obscuring dust and gas which interferes with studies of AGNs which are perceived at a more oblique observing angle. In fact, blazars have been studied over very broad ranges of the electromagnetic spectrum, often over multiple decades of energy (namely gamma-ray through radio): complementary observations of these sources at multiple wavelengths (and often conducted simultaneously) have yielded tremendous insights into the properties of these sources. Observations of blazars with the STA form a crucial portion of the science program of the instrument, where measurements of the flux densities of blazars can be compared with observations made at other wavelengths with the intent of constraining the types and characteristics of the emission mechanisms (such as synchrotron radiation) that are responsible for the observed emission.

The research project that is the basis of this proposed URF is to obtain and analyze archival X-ray observations made of blazars using the Chandra X-ray Observatory. William will begin his work with the approximately 20 blazars that form a program sample of sources to be observed with the STA and he will search for archival Chandra observations of these objects. He will then analyze these archival sets with the intent of extracting and fitting the spectra of these sources: while the nominal X-ray spectrum of a blazar is expected to be produced by synchrotron emission and should be best fit with a power-law with a photon index $\Gamma \sim 2$, several blazars have shown evidence for featuring multiple components in their X-ray spectrum (for example, thermal components have been detected as

well as the nominal synchrotron component). In the next stage of the research project, William will search for archival Chandra observations of additional known blazars (such as 3C sources – that is, sources that belong to the Third Cambridge catalog of radio sources) that feature a flux density high enough to be detected with the STA. In this manner, William will increase the number of blazars contained in the science program for the STA as well as develop a statistically significant sample of objects for general comparisons between radio and X-ray properties.

Project Dissemination:

Oral Presentation:

William P. Moffitt and Dr. Thomas Pannuti (2013, April). Chandra Observations of the Nearby Spiral Galaxies NGC 45 and NGC 6946, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Young, Kristin

Major:

Physics

Faculty Mentor:

Thomas Pannuti

Research/Project Title:

An Analysis of Synchrotron X-ray Emission from the Galactic Supernova Remnant Tycho (3C 10, SN 1572) with the Chandra X-ray Observatory

Project Abstract/Summary:

Remarkable gains in both the flux sensitivities and the angular resolution capabilities have been realized with the current generation of X-ray observatories, namely XMN-Newton and Chandra. One field of study in X-ray astronomy that has seen tremendous growth (precisely due to these gains) is the study of X-ray synchrotron emission from Galactic supernoval remnants (SNRs). Very energetic cosmic-ray electrons that have been accelerated to extremely relativisticvelocities are known to generate this emission. However, the exact details of cosmic-ray acceleration by SNRs remain elusive: unresolved issues in these field include the maximum energies that may be attained by cosmic-ray electrons accelerated by SNRs as well as the spatial distribution (either in diffuse features or in narrow filaments) of these electrons along the expanding shock fronts of SNRs. Complementary X-ray and radio observations of Galactic SNRs are frequently conducted and analyzed to help constrain models of synchrotron emission from these sources over very broad ranges of electromagnetic spectrum (often multiple decades of energy).

The Galactic SNR Tycho (also known as 3C 10 and SN 1572) is a well-studied X-ray source. it has been targeted X-ray observatories since the 1970s and continues to be the subject of deep observations with the current generation of X-ray observatories: in fact, a total of approximately 1.1 Msec of Chandra observing time has been devoted to the study of this SNR since the launch of the observatory in 1999. Inspection of individual Chandra observations of this SNR reveal the presence of high energy X-ray emission (assumed to be synchrotron in origin) located in both narrow filaments along the leading shock front of the expanding SNR as well as in diffuse emission seen toward the SNR interior. Published studies of these X-ray images in the literature have only concentrated on individual observations and on the low-energy X-ray emission (which is thermal in origin) from this SNR: a detailed study of the regions of high-energy synchrotron X-ray emission as sampled by multiple observations has yet to be conducted.

Kristen Young conducted radio observations of Tycho with the 21-Meter to determine the total flux density from the SNR at an observing frequency of 1 GHz. Assuming that the radio emission from the SNR may be modeled as a uniform circle, she estimated the total surfact brightness of the SNR. She downloaded and reduced all of the datasets available for archival Chandra observations of Tycho: spectra were extracted from particular regions and fit with standard models that describe photoelectric absorption along the Galactic lines of sight, emission from thermal plasmas and synchrotron radiation. To fit the high energy emission detected in each spectra, different standard models for high energy emission – such as simple power laws and more sophisticated synchtron models – were applied to the data. Significant variations were seen from one region to another in such properties as temperature, elemental abundances, ionization timescales and photon indices; the application of synchrotron models allowed us to estimate the maximum energies of cosmic-ray electrons accelerated by this SNR. Estimated values for this energy were approximately 30 TeV, well short of the 3000 TeV associated with the knee of the cosmic-ray spectrum which is believed to be he maximum energy to which SNRs accelerate these particles.

Project Dissemination:
N/A
Awards and/or Honors:
N/A
Post-Graduation Plans (Seniors only):
N/A

DEPARTMENT OF HEALTH, WELLNESS, AND HUMAN PERFORMANCE

Holbrook, Miranda

Major:
Health Promotion
Faculty Mentor:
Gina Gonzales and Jennifer Dearden
Research/Project Title:
Motivations and Barriers to Physical Activity in College Health and Wellness Majors
Project Abstract/Summary:
Active lifestyle habits established during the college years can have a lifelong impact on adult health. Health and wellness (HWHP) majors are presumed to have a high level of motivation toward Physical Activity (PA) and structured exercise, however little is known about their reasons for being active. Therefore it is important to understand the motivations and barriers to PA in this population. The purpose of this study is to understand exercise and PA factors within HWHP majors and across class rankings. Subjects included 71 undergraduate volunteers recruited from HWHP courses. Subjects completed the Exercise Motivations Inventory 2 and the International Physical Activity Questionnaire. A small but significant correlation was found (r=.325) between the EMI-2 score (n=51 items) and MET-minutes per week from the IPAQ. A one-way ANOVA was conducted to compare the effect of self-reported class rank on total EMI score. No significant differences were detected among the groups. Results revealed insight into motivations and the amount of PA in this population.
Project Dissemination:
Poster Presentations:
Holbrook, M, Gonzalez, G, and Dearden, J. (2013, April). Motivations and Barriers to Physical Activity in College Health and Wellness Majors, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.
Awards and/or Honors:
N/A
Post-Graduation Plans (Seniors only):
N/A

DEPARTMENT OF MATHEMATICS, COMPUTER SCIENCE, AND PHYSICS

Blankenship, Scott

Major:
Physics
Faculty Mentor:
Jennifer Birriel
Research/Project Title:
Widefield CCD Photometry
Project Abstract/Summary:
Variable stars periodically change in their observed brightness over time, either because they exist in a special stage of stellar evolution or are members of an exlipsing binary system. Monitoring of variable stars allows us to determine a variety of steller parameters of crucial importance to our understanding of stellar evolution. Most telescopic CCD observations focus on variable stars fainter than 7^{th} magnitude simply because stars bright than quickly saturate the CCD camera. Using an older CCD camera coupled to a camera lens, we develop a low cost, portable system capable of photometric and monitoring of bright, naked eye variable stars. The system is also useful for solar and lunar studies when the appropriate filters are employed. We present our preliminary results, examining the solar limb darkening effect and lunar reflectance.

Project Dissemination:

Poster Presentation:

Blankenship, Scott and Birriel, Jennifer (2013, April). Development of a Wide-field CCD Camera for Photometry, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Blanton, Joseph

Major:

Computer Science

Faculty Mentor:

Sherif Rashad

Research/Project Title:

Intrusion Detection in Wireless Mobile Networks using Data Mining Techniques

Project Abstract/Summary:

As wireless networks become more prominent in our society, security for these networks is a growing issue. Due to the lack of a physical infrastructure, these networks are much easier to infiltrate and many old security solutions no longer work. The problem of intrusion detection becomes more difficult in integrated mobile networks, where different structures of mobile networks are integrated to provide better quality of service every time and everywhere. The goal of our research is to design and implement new intrusion detection techniques for mobile networks using data mining technology. We will focus on the anomaly detection side of intrusion detection. Our goal is to find the most time efficient algorithm for developing normal profiles of mobile users and responding to intrusions. We will design and implement new algorithms to improve the speed and memory efficiency of the intrusion detection process in mobile networks. The student studied new data mining classification techniques and he used a data mining tool called WEKA to learn how to classify datasets and to compre between different data mining techniques including neural networks. Experimental results show that classification techniques and can be used effecitively to detect intrusions with high accuracy.

Project Dissemination:

Poster Presentations:

Joseph Blanton and Sherif Rashad (2013, April). Intrusion Detection in Wireless Mobile Networks using Data Mining Technqiues, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Joseph Blanton and Sherif Rashad (2013, February). Intrusion Detection in Wireless Mobile Networks using Data Mining Techniques, Posters-at-the-Capitol, Frankfort, Ky, February.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Byrd,Jonathan

Major:

Computer Science

Faculty Mentor:

Robin Blankenship, Doug Chatham, Duane Skaggs

Research/Project Title:

Studies in Separation in Graphs

Project Abstract/Summary:

A famous problem asks how many Queens can be placed on a chessboard of arbitrary size so that no two Queens attack each other. This question has led to many interesting applications, particularly those related to parallel computing and network communication. This project explores a recent variation of the original problem in which Pawns are permitted to separate Queens, thus allowing more Queens to be placed on the board. The question is then how many Pawns are needed in order to allow a specified larger number of Queens to be placed.

In the few months that Jonathan Byrd has been on this project, he has caught up on previous work to the extent that he was able to help present it at the Celebration of Student Scholarship. He has also made preliminary plans with his partner Michael McGinnis for an “N+k Queens game engine”.

Project Dissemination:

Oral Presentation:

Byrd, Jonathan, McGinnis, Michael, Blankenship, Robin, Chatham, R. Douglas, and Skaggs, R. Duane (2013, April). Composition of Solutions for the n+k Queens Seperation Problem, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Carroll, Joshua

Major:

Computer Science

Faculty Mentor:

Sherif Rashad

Research/Project Title:

Novel Load Balancing Techniques for Wireless Heterogeneous Networks

Project Abstract/Summary:

Wireless heterogeneous networks integrate different types of radio access networks (RANa) such as cellular networks, wireless local area networks (WLANs), and mobile Ad hoc networks (MANET). This configuration enables wireless networks to provide better services with high rates and to accommodate more users with better QoS. The goal of this research project is to design and implement novel predictive techniques that can be used to solve the problem of load balancing in wireless heterogeneous networks. The proposed technique was based on mobility models and load models of different RANs. These models will be generated periodically and they will be utilized by the load balancing techniques to maximize the overall coverage of wireless heterogeneous networks. The problem of load balancing was explained to the student and he read research papers related to this research project. He started to learn how to use a data mining tool called WEKA that can be used to generate the mobility models. The student did not work on this project in Spring 2013.

Project Dissemination:

The student only worked one semester, he was replaced in the spring.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Carson, William

Major:

Computer Science

Faculty Mentor:

Sherif Rashad

Research/Project Title:

Developing Novel Data Mining Algorithms to Support Location-based Services in Mobile Networks

Project Abstract/Summary:

Location-based services are prevalent in today's mobile networks, especially with smart-phones and GPS chips. Recent mobile applications can use the current locations of mobile users to provide different services. There is still a need to develop new techniques that can analyze the history of visited locations and generate the behavior patterns of mobile users to provide new smart and predictive services. The goal of this research project is to develop novel data mining algorithms that can be used to mine the history of mobile users to support location-based services. The student started to learn the basics of data mining and how to design, implement, and evaluate data mining algorithms. We started to design and implement an association rules mining technique that can be used to generate decision trees to decipher the data. These decision trees allow on-the-fly processing of data based on the information and gain calculated using the past data. The association rules mining technqiue was implemented using Python programming language.

Project Dissemination:
The student made progress but he was not at a point of presenting results.
Awards and/or Honors:
N/A
Post-Graduation Plans (Seniors only):
N/A

Chang, Jorge

Major:
Computer Science/Math
Faculty Mentor:
Heba Elgazzar
Research/Project Title:
Content-based Image Retrieval Using a Multi-histogram Approach
Project Abstract/Summary:
The purpose of this project is to develop and optimize a content-based image retrieval system that can be used to compare an input image against a database of images to retrieve similar images. The similarity will be based on the actual contents of these images. A number of popular image processing techniques that can be used to extract important features from images were considered to increase the matching performance. We propose a multi-histogram approach that includes standard, global and semi-global edge histogram, and color histogram. In this presentation, we take a look at how these different techiniques work along with their strengths and weaknesses in order to find a good balance for a functional content-based image retrieval system.
Project Dissemination:
Oral Presentations:
Jorge Chang, Heba Elgazzar (2013, March). Content-based Image Retrieval using Multi-Histogram Approach. Symposium in the Mathematical, Statistical, and Computer Sciences, Eastern Kentucky University, March.
Jorge Chang, Heba Elgazzar (2013, April). Content-based Image Retrieval using Multi-histogram Approach. Kentucky Section of the Math Association of America, Transylvania University, April.
Jorge Chang, Heba Elgazzar (2013, April). Content-based Image Retrieval using Multi-Histogram Approach. Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.
Awards and/or Honors:
N/A
Post-Graduation Plans (Seniors only):
N/A

Conn, Bryan

Major:
Physics
Faculty Mentor:
Jennifer Birriel
Research/Project Title:
Reducing Light Pollution on MSU's Campus
Project Abstract/Summary:
Light pollution is a problem not only for astronomers but for city budgets and climatologists alike. Astronomers see light pollution as a way of preventing them from viewing the cosmos above, while the city budget committee should see light pollution as cutting into their bottom line. By lighting the sky with inefficient light fixtures we are burning unnecessary fuel, spending unnecesary funds, and blocking the stars from our sight. As a way of modeling this problem and finding an inexpensive solution, a scale model of a small area around the Bell Tower on Morehead State University's campus was built by a previous student. However, the student did not have sufficient time to design an electrical circuit that met the current and voltage restraints of each lamp. We present here our design and analysis of the circuit. We compare our theoretical calculations to the measured currents and voltages. We conclude by briefly discussing how this model is to be used in conjunction with a light meter to find the best configuration of light fixtures to reduce power consumption and light pollution while simultaneously providing the safest lighting environment in the area.

Project Dissemination:

Oral Presentations:

Conn, Bryan and Birriel, Jennifer (2013, April). Reducing Light Pollution on MSU's Campus, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Conn, Bryan and Birriel, Jennifer (2013). Reducing Light Pollution on MSU's Campus, KY Section of the Mathematical Society of America State-wide Meeting.

In the future the student will present at the Kentucky Academy of Science and submit work for publication. Future developments will be presented at the KY Academy of Science Meeting and the KY Association of Physics Teachers.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Higginbotham, Logan

Major:

Mathematics

Faculty Mentor:

Robin Blankenship, Doug Chatham, Duane Skaggs

Research/Project Title:

Studies in Separation in Graphs

Project Abstract/Summary:

A famous problem asks how many Queens can be placed on a chessboard of arbitrary size so that no two Queens attack each other. This question has led to many interesting applications, particularly those related to parallel computing and network communication. This project explores a recent variation of the original problem in which Pawns are permitted to separate Queens, thus allowing more Queens to be placed on the board. The question is then how many Pawns are needed in order to allow a specified larger number of Queens to be placed.

In the one semester he was with the project, Logan Higginbotham assisted his coworkers and also prepared a chart summarizing the progress made on the problem.

Project Dissemination:

Logan only worked one semester; he was student teaching the second semester. Logan had presented previously at the Kentucky Mathematical Association of America.

Awards and/or Honors:

Spring 2013 Commencement Speaker

Post-Graduation Plans (Seniors only):

Logan Higginbotham has accepted admission as a graduate student in mathematics at the University of Tennessee, Knoxville.

Hohenstein, Erich

Major:

Computer Science

Faculty Mentor:

Sherif Rashad

Research/Project Title:

Design and Implementation of Parallel and Distributed Data Mining Algorithms

Project Abstract/Summary:

Data mining extracts implicit, previously unknown, and potentially useful information from datasets. The goal of this research project is to design and implement parallel algorithms that can be used for a wide range of data mining applications to mine large databases. In this phase of the research, we designed and implemented a parallel version of the Apriori algorithm in order to improve its performance. We used OpenMP to support shared-memory parallel programming in C++. We utilized the set of compiler directives, library routines, and environment variables that are provided by OpenMP.

Project Dissemination:

Oral Presentations:

Erich Hohenstein and Sherif Rashad (2013, April). Design and Implementation of Parallel Data Mining Algorithms, Annual KYMAA Meeting, Lexington, KY, April.

Erich Hohenstein and Sherif Rashad (2013, April). Design and Implementation of Parallel Data Mining Algorithms, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/a

Post-Graduation Plans (Seniors only):

N/A

Lamb, Zachary

Major:

Computer Science

Faculty Mentor:

Sherif Rashad

Research/Project Title:

Mobile Data Mining Algorithms for 4G Mobile Networks

Project Abstract/Summary:

There is a need for a new generation of mobile data mining algorithms that can be used in the mobile environment to support new services and to enhance the current services with the new integrated structure in the 4G mobile networks. The student in this project started to learn how to design, implement, and evaluate mobile data mining algorithms that can be used to support the new services and the new integrated structure of the 4G mobile networks. We focused on frequent sequential pattern mining algorithms that can be used to discover frequent patterns in a sequential database. Many current algorithms are restricted to limited data types. The increasing number of smartphone users had led to the generation of large amounts of user-related data. The stunted implemented the PrefixSpan algorithm for Android smartphones in a mobile environment.

Project Dissemination:

Oral Presentation:

Zachary Lamb and Sherif Rashad (2013, April). Mobile Data Analysis using Frequent Sequential Pattern Mining, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

McGinnis, Michael

Major:

Computer Science

Faculty Mentor:

Robin Blankenship, Doug Chatham, Duane Skaggs

Research/Project Title:

Studies in Separation in Graphs

Project Abstract/Summary:

A famous problem asks how many Queens can be placed on a chessboard of arbitrary size so that no two Queens attack each other. This question has led to many interesting applications, particularly those related to parallel computing and network communication. This project explores a recent variation of the original problem in which Pawns are permitted to separate Queens, thus allowing more Queens to be placed on the board. The question is then how many Pawns are needed in order to allow a specified larger number of Queens to be placed.

In the few months that Michael McGinnis has been on this project, he has caught up on previous work to the extent that he was able to help present it at the Celebration of Student Scholarship. He has also made preliminary plans with his partner Jonathan Byrd for an “N+k Queens game engine.”

Project Dissemination:

Oral Presentations:

Byrd, Jonathan, McGinnis, Michael, Blankenship, Robin, Chatham, R. Douglas, and Skaggs, R. Duane (2013, April). Composition of Solutions for the n+k Queens Separation Problem, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

McQueary, Zane

Major:

Physics

Faculty Mentor:

Jennifer Birriel

Research/Project Title:

Applications of the Unihedron Sky Quality Meter

Project Abstract/Summary:

This Research Fellowship focuses on the light pollution present on the campus of Morehead State University. The contribution due to natural sky brightness and light pollution will be examined when analyzing the SQM-LE data results. Furthermore, a comparison between the Morehead campus and other SQM-LE locations will be utilized.

Project Dissemination:

Oral Presentations:

McQueary, Zane G. and Birriel, Dr. Jennifer (2013, April). Applications of the Unihedron Sky Quality Meter, Kentucky Math Association of America Annual Meeting, Lexington, KY, April.

McQueary, Zane G. and Birriel, Dr. Jennifer (2013, April). Applications of the Unihedron Sky Quality Meter, Celebration ofStudent Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Noble, Hunter

Major:

Computer Science

Faculty Mentor:

Heba Elgazzar

Research/Project Title:

Comparison between Different Classification Techniques

Project Abstract/Summary:

The goal of this project is to study different classification techniques and to compare between these techniques. Classification is one of the basic tasks in machine learning. These techniques will include the K-Nearest Neighbot (KNN) classifier, Naïve Bayes classifiers, and logic-based techniques such as rule-based classifier and decision trees. The student will be introduced to the field of machine learning and its applications. He will implement different classification techniques and use different data sets to test and compare between the different classifiers.

Project Dissemination:

It is expected that this project will result in a technical paper that can be submitted for publication. The student involved in this project did not advance enough to present results.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Parker, William T. Jr.

Major:

Mathematics

Faculty Mentor:

R. Duane Skaggs

Research/Project Title:

Identifying Codes on Chessboards

Project Abstract/Summary:

A famouns problem asks how many Queens can be placed on a chessboard of arbitrary size so that no two Queens attack each other. This question and its many variants have led to many interesting applications, particularly those related to parallel computing and network communication. This project introduces a variation of this problem in which each square must be uniquely identified based solely from the information of which Queens attack it. This variant of the Queens Problem relates the traditional problem to the modern study of error-detecting and error-correcting codes.

This project followed the typical strategy for studying variants of the queens Problem, which is first to establish results for Bishops and Rooks then establish patterns for small boards. General results are notoriously difficult to obtain but the necessary basis for future work has been established.

Project Dissemination:

Poster Presentation:

William T. Parker, Jr. and R. Duane Skaggs (2013, April). Identifying Codes on Chessboards, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

Mr. Parker's poster at the Celebration of Student Scholarship received a score of 99 points from one judge. Another judge commented on his insight into applications of a "seemingly inapplicable" project.

Post-Graduation Plans (Seniors only):

N/A

Peterman, Trenton

Major:

Physics

Faculty Mentor:

Kent Price

Research/Project Title:

Thickness Effect on Photovoltage Decay of CdTe Solar Cells

Project Abstract/Summary:

Attempts were made to measure DC capacitance of CdTe solar cells but results were not consistant from one measurement to another for unknown reasons. Instead a set of CdTe solar cells with DcTe layer thickness between 0.5 microns and 2 microns was obtained from the University of Toledo. Cells were examined via photovoltage decay using a pulsed LED and computer-controlled oscilloscope. A C# program was written by the student to automate data compliation and formating for easier analysis. Decay time cosntants for these devices ranged from 20 microseconds to 3 milliseconds but no discernable trend was observed with cell thickness. Further study is required to undersand the variation of decay time with cell thickness.

Project Dissemination:

Oral Presentation:

Trenton Peterman and Kent J. Price (2013, April). Open-circuit Voltage Decay of CdTe Solar Cells. Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Satterfield, Trevor

Major:

Physics

Faculty Mentor:

Jennifer Birriel

Research/Project Title:
Classroom and Research Uses of Inexpensive Spectrometer
Project Abstract/Summary:
Spectroscopy is an extremely useful tool to determine the chemical properties of materials both on earth and in space. The RSpec Explorer Spectrometer is the first truly affordable spectrometer that is moderate resolution and has software that allows for quantitative analysis of spectra. This device was originally designed as a demonstration device for classroom use. We explore the use of this device as a quantitative tool for advanced physics laboratory experiments and for undergraduate research projects. We present several potential laboratory explorations and some potential uses of the device for astronomical research.
Project Dissemination:
Poster Presentation:
Satterfield, T. and Jennifer Birriel, (2013, April). Classroom and Research Uses of Inexpensive Spectrometer, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.
Awards and/or Honors:
N/A
Post-Graduation Plans (Seniors only):
N/A

Sharma, Biswas
Major:
Physics/Math
Faculty Mentor:
Robin Blankenship, Doug Chatham, Duane Skaggs
Research/Project Title:
Studies in Separation in Graphs
Project Abstract/Summary:
A famous problem asks how many Queens can be placed on a chessboard of arbitrary size so that no two Queens attack each other. This question has led to many interesting applications, particularly those related to parallel computing and network communication. This project explores a recent variation of the original problem in which Pawns are permitted to separate Queens, thus allowing more Queens to be placed on the board. The question is then how many Pawns are needed in order to allow a specified larger number of Queens to be placed.
It has been proven that the problem has a solution when n**>** max**{**87+, 25k**}**. Biswas Sharma and his partners attempt to obtain nice patterns and lower this bound on n by composing solutions and partial solutions for smaller values of n to obtain solutions for larger values of n.
Project Dissemination:
Sharma, Biswas (2013, April). Composition of Solutions for n+k Queens Separation Problem, the Kentucky Section of Mathematical Association of America Annual Meeting, Lexington, KY, April.
Byrd, Jonathon and Sharma, Biswas (2013, April). Composition of Solutions for the n+k Queens Separation Problem, University of Tennessee, Knoxville Mathematics Department Seventh Annual Undergraduate Math Conference, Knoxville, TN, April.
Awards and/or Honors:
N/A
Post-Graduation Plans (Seniors only):
N/A

DEPARTMENT OF PSYCHOLOGY

Doyle, Paige
Major:
Psychology
Faculty Mentor:
Shari Kidwell
Research/Project Title:
Parents' Mentalization Abilities in the Meta-Emotions Interview

Project Abstract/Summary:

The major air of Dr. Kidwell's larger research agenda is to understand the mechanisms through which high-quality (i.e., secure) parent-child relationships and sensitive caregiving promote children's social, emotional, and academic achievement. A comprehensive longitudinal study, funded through NSF's KY EPSCoR and MSU's RCPC, has been the primary vehicle through which such questions are beginning to be answered. The study began when the children were preschoolers and a more recent RCPC grant enabled us to assess how the families were doing now that the children are in their early teens. Our past research has suggested that the majority of our participating parents are insecurely attached and that these attachments and the accompanying difficulties seem to have often been "passed down" from parent to child. A core concept in this intergenerational pattern is the parents' ability to mentalize. Mentalization is the capacity to think about emotions, motives, and thoughts, both in oneself and in others (Bateman & Fonagy, 2006). If an individual's early experience is of insensitive caregiving, mentalization abilities are thought to be disrupted, leading to failture to fully and objectively understand oneself and others. And this has implications for parenting.

Paige's URF work has focused on Gottman & Katz's (1997) Meta-Emotions interview, the most comprehensive measure of parents' mentalization abilities we have in the project. This interview asks parents to discuss their own emotions, and those of their children, in terms of which are commonly experienced, which pose the most difficulty for them, how they respond to them, and how they see their overall role as socializers of their children's emotions. Paige reviewed the literature and assisted in the adaptation of existing coding schemes. She then completed the coding of each parent's interview, culminating in lengthy discussions about the rationale for her decisions.

The initial findings from her work, presented at the Celebration, were actually the opposite of what she expected: parents who scored low on the interview had children who reported more positive self-concepts on a questionnaire. However, when Paige's data are examined in relation to other measures in the project, these findings will likely make sense. For example, one 11 year old boy who reported a very high self-concept has a mother who finds anger a totally unacceptable emotion under any and all circumstances. In a separate assessment, he was found to have a very defended insecure attachment, suggesting that he has had to hide negative emotions (including anger) in daily life. This could certainly impact his self-report, and in fact his mother sees him as having a severe anger problem. Like too many of our participating parents, his mother experienced childhood maltreatment. Ultimately Paige's data will be a crucial part of our search to understand how such parental difficulties may create risk for their children.

Project Dissemination:

Poster Presentation:

Doyle, P.N., Chin, F., Kidwell, S.L., and Burns, S. (2013, April). Parent's Approach to Emotions and Their Children's Emotional and Behavioral Competence, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Ms. Doyle will be attending a master's program in Public Health at Eastern Kentucky University.

Hargett, Justin

Major:

Psychology

Faculty Mentor:

David Butz

Research/Project Title:

Individual Differences in Overcoming Stereotypes: Implications for Career Aspirations

Project Abstract/Summary:

Although much work has demonstrated the negative effects of awareness of stereotypes about one's group, awareness of stereotypes may inspire positive responses including a desire to overcome stereotypes. The present investigation explored the degree and implications of individual differences in the desire to overcome gender stereotypes. We hypothesized that women would exhibit a stronger motivation to overcome gender stereotypes than men and that a stronger motivation to overcome stereotypes would be associated with increased desire to engage in gender counter-stereotypical pursuits. One hundred, thirty-two undergraduate Psychology students (48 male, 83 female, 1 not disclosed) completed a survey in which they reported up to three stereotypes about people of their gender and rated the positivity-negativity of each stereotype. Participants then completed the recently developed Motivation to Overcome Gender Stereotypes Scale, which included items assessing internal motivation to overcome gender stereotypes (i.e., striving to overcome due to personal importance) and external motivation (i.e., overcoming stereotypes due to external factors, such as pressure from friends and family). Participants next

reported their interest in taking part in future research studies, which included three requiring stereotypically masculine qualities, three requiring stereotypically feminine qualities, and three neutral in regards to gender sterotypic qualities. After completing this survey, a confederate pretending to need data for a class project asked participants to complete a paper-and-pencil survey which included questions about interest in various types of stereotypically masculine and feminine careers. Although degree of motivation did not significantly vary as a function of participant gender, results indicated that participants who perceived gender stereotypes about their gender to be more negative, reported greater interest in masculine over feminine careers than their low internal motivation counterparts. Females higher compared to lower in external motivation to overcome gender stereotypes reported a greater interest in pursuing counter-stereotypical activities, such as research projects requiring stereotypically masculine attributes. Among males, although greater belief that gender stereotypes were negative resulted in increased motivation to overcome these stereotypes, greater motivation did not lead to interest in counter-stereotypical pursuits. These findings provide evidence on the validity of the Motivation to Overcome Gender Stereotypes Scale for women. Additionally, the results from this study indicate that routes to overcoming gender stereotypes among women may include the pursuit of gender counter-stereotypical activities and careers.

Project Dissemination:

Poster Presentations:

Hargett, J.M., Butz, D.A., and Hogan, M.S. (2013, May). The Motivational Implications of Gender Stereotypes, Midwestern Psychological Association, Chicago, IL, May.

Hargett, J.M., Butz, D.A., and Hogan, M.S. (2013, April). The Motivational Implications of Gender Stereotypes, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Mr. Hargett will do an internship with the Walt Disney Company.

House, Shelby

Major:

Psychology

Faculty Mentor:

Shari Kidwell

Research/Project Title:

Parent-Child Attachment among Early Adolescents

Project Abstract/Summary:

The major aim of Dr. Kidwell's larger research agenda is to understand the mechanisms through which high-quality parent-child relationships (i.e., secure attachment) and sensitive caregiving promote children's social, emotional, and academic achievement. A comprehensive longitudinal study, funded through NSF's KY EPSCoR and MSU's RCPC, has been the primary vehicle through which such questions are beginning to be answered. The study began when the children were preschoolers and was funded by RCPC to assess how the families are doing now that the children are in their early teens. Our past research has shown that parents who show sensitivity to their child's emotions tend to have children who are securely attached and have better adjustment. However, will such findings be replicated at this latter age, when peers become increasingly important? And what is a salient task to measure children's attachment at this age? These questions have been central to Shelby's Fellowship during the past 2 years.

Questionnaire measures of attachment are fairly popular, but when children have a need within their family to hide their negative feelings, such methods may not work well. These are precisely the kind of conditions in which many of our participating children have grown up. In contrast, the Social Age Assessment of Attachment (Crittenden & Kozlowska, 2010), are intensive one-hour child interview, seem likely to have revealed very important individual differences in children's perceptions of themselves and their families, including how they discuss potentially threatening topics. Coding these interviews was Shelby's main priority this year. She attended weekly meetings with Dr. Kidwell and clinical graduate students, learning a complex system of weighing various factors to arrive at a classification of each child's interview. Undoubtedly, these skills will be useful as Shelby continues her training as a doctoral student.

The initial results from these efforts were recently presented at the Society for Research on Child Development. Key findings included continuity in children's attachment classification from age 4 to age 12, as well as an association between parent and child attachment. These results were well-received at the conference and will be subsequently submitted for publication.

Project Dissemination:

Poster Presentations:

House S.D., Kidwell, S.L., Reed, O., Weeks, B., Sizemore, K., Fugate, K., Ward, T., Tatman, M. and Justice, N. (2013, April). Am I good or Bad? Associations of Parental Sensitivity with Children's Emotion Competence Across 6 Years, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Kidwell, S.L., Sizemore, K.M., House, S.D., Fugate, K.M., and Jackson, M. (2013). Attachment Continuity and Discontinuity Among a Moderate-risk Rural Sample, Society for Research on Child Development's Biennial Conference, Seattle, WA.

Kidwell, S.L., House, S.D., Qu, J., Ward, T. and Jackson, M. (2012). The Relationship Between Attachment and Emotion Skills through Early and Middle Childhood, International Association for the Study of Attachment Biennial Conference, Frankfort, Germany.

Kidwell, S.L., Lowe, N., Sizemore, K.M., Qu, J., House, S.D., and Morris, A. (2012). The Manic Robot Boy: A Dynamic Maturational Model of Attachment and Adaptation Functional Formulation of Pediatric Bipolar Disorder, International Association for the Study of Attachment Biennial Conference. Frankfort, Germany.

Oral Presentation:

House, S.D., Kidwell, S.L., Sizemore, K., and Fugate, K. (2012). Am I good or Bad? Parental Sensitivity is Associated with Children's Emotion Competence, Kentucky Academy of Science Annual Conference, Richmond, KY.

Awards and/or Honors:

Certificate of Merit, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Post-Graduation Plans (Seniors only):

To attend Marshall University's PsyD program in Clinical Psychology.

Justice, Natalie

Major:

Psychology

Faculty Mentor:

Wesley White

Research/Project Title:

Evaluation of Learning Products Used to Teach Critical Thinking

Project Abstract/Summary:

Fourteen online lessons were developed that were intended to introduce students to major critical thinking conceptualizations. Each lesson could be completed in 5 – 20 minutes. The research used an experimental approach to improve these lessons. Subjects were undergraduate students who were recruited via an automated research sign up system (SONA) from undergraduate psychology courses, primarily Introduction to Psychology. Students came to the Psychology Department computer lab and viewed two to three lessons. Students viewed two different versions of one of these lessons. Versions differed: in whether they did not or did include motivational content; in whether illustrative material was in transcript or video form; and in whether each page of a lesson did not or did include a small number of comprehension quizzes. Students preferred versions with motivation content, even when such content doubled lesson duration, but this motivational content did not improve performance on subsequent lessons; students preferred a version of a lesson with videos over a version with transcripts, and the video version did not degrade performance on activities associated with the illustrative material; and embedded comprehension quizzes increased processing of content related only to the quizzes and not processing of content generally. Results suggest practices that should be used in the lessons to increase interest value and the learning of critical thinking content. Lessons will be revised in light of these results. The revised lessons will be part of a package of critical thinking instructional materials. Materials will be used in fall 2013 with freshman psychology students and in at least one section of FYS.

Project Dissemination:

Poster Presentations:

Justice, N., Tatman, M., Smith L., and White, W. (2013, April). Media Type and Comprehension Questions in Online Critical Thinking Lessons, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Tatman, M., Justice, N., Smith, L., and White, W. (2013, April). Motivational Content in Online Critical Thinking Lessons, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Maione, Gianni

Major:

Psychology

Faculty Mentor:

Ilsun White

Research/Project Title:

Involvement of NMDA Receptors in Alcohol-induced Behavioral Changes/Morphine Effects on Simple and Complex Learning in Rats: Adolescence through to Adulthood

Project Abstract/Summary:

The first part of the project involved examining behavioral changes and changes in prefrontal NMDA receptors. Alcohol influences a range of behaviors, via modulation of NMDA and GABA receptors in the brain. Student examined the acute effects of alcohol on simple learning in adult rats, using a fixed ration 5 (FR5), which required five lever-presses for each food pellet. Alcohol dose-dependently increased response latency as well as the average time to complete five lever-presses in each trial, without affecting the number of lever-presses or food consumption. The second part of the student's project examined the effects of morphine on simple and complex learning. Like alcohol, morphine is a potent suppressant of the central nervous system. Morphine produced characteristic behavioral deficits similar to those seen in alcohol rats.

Project Dissemination:

Poster Presentations:

Maione, Gianni P., Whitley, Rachael, White, Ilsun M. (2012, November). Morphine Administration during Adolescence Leads to Learning Deficits in Adulthood, 98th Annual Kentucky Academy of Science, Berea College, Berea, KY.

Maione, Gianni P., White, Ilsun M. (2012, April). Acute Alcohol Effects of Simple Learning in Rats, Celebration of Student Scholarship, Morehead State University, Morehead, KY.

Maione, Gianni P., White, Ilsun M. (2012, April). Acute Alcohol Effects of Simple Learning in Rats, University of Louisville Neuroscience Day, Louisville, KY.

Maione, Gianni P., White, Wesley, and White, Ilsun M. (2012, April). Coactivation of D1/D2 Receptors is Required for Amphentamine-induced Hypophagia, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

Second place, Undergraduate Research Paper Competition, Psychology Section, Kentucky Academy of Science, November.

Psychology Department Combined Academic and Research Excellence Award, December.

Third-place, Undergraduate Poster Research Poster Competition, Neuroscience Day, April.

Summer Research Internship, University of Louisville School of Medicine, June-July.

First-place, Undergraduate Research Poster Competition, Psychology Section, Kentucky Academy of Science, November.

Outstanding Psychology Senior, College of Science and Technology.

Outstanding Psychology Undergraduate, Morehead State University.

Post-Graduation Plans (Seniors only):

Student has been accepted to School of Medicine, Indiana University.

Tatman, Makinzee

Major:

Psychology

Faculty Mentor:

Wesley White

Research/Project Title:

Evaluation of Learning Products Used to Teach Critical Thinking

Project Abstract/Summary:

Fourteen online lessons were developed that were intended to introduce students to major critical conceptualizations. Each lesson could be completed in 5 to 20 minutes. The research used an experimental approach to improve these lessons. Subjects were undergraduate students who were recruited via an automated research sign up system (SONA) from undergraduate psychology courses, primarily Introduction to Psychology. Students came to the Psychology Department comptur lab and viewed two of three lessons. Students viewed two different versions of one of these lessons. Versions differed: in whether they did not or did include motivational content; in whether illustrative material was in transcript or video form; and in whether each page of a lesson did not or did include a

small number of comprehension quizzes. Students preferred versions with motivational content, even when such content doubled lessons duration, but this motivational content did not improve performance on subsequent lessons; students preferred a version of a lesson with videos over a version with transcripts, and the video version did not degrade performance on activities associated with the illustrative material; and embedded comprehension quizzes increased processing of content related only to the quizzes and not processing of content generally. Results suggest practices that should be used in the lessons to increase interest value and the learning of critical thinking content. Lessons will be revised in light of these results. The revised lessons will be part of a package of critical thinking instructional materials. Materials will be used in fall 2013 with freshman psychology students and in at least one section of FYS.

Project Dissemination:

Poster Presentations:

Tatman, M., Justice, N., Smith, L. and White, W. (2013, April). Motivational Content in Online Critical Thinking Lessons, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Justice, N., Tatman, M., Smith, L. and White, W. (2013, April). Media Type and Comprehension Questions in Online Critical Thinking Lessons, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

N/A

Wagoner, Martina

Major:

Psychology

Faculty Mentor:

David Butz

Research/Project Title:

National Symbols and Outgroup Prejudice

Project Abstract/Summary:

Although national symbols are pervasively displayed and serve as powerful reminders of one's national group membership, only recently have researchers conducted empirical examinations of the psychological effects of exposure to such symbols. Drawing from prior research, indicating that exposure to national symbols (i.e., an American Flag) reduces outgroup prejudice (Butz, Plant, and Doerr, 2007), the present investigation sought to replicate this finding and explore the boundary conditions of this effect. Sixty participants were randomly assigned to a condition in which either a U.S. flag, a U.S. flag in a nationalistic context, or a neutral image was displayed on a mouse pad in a lab room. Participants then reported their national identification and attitudes toward a range of outgroups. Drawing from Butz and colleagues' theorizing, it was hypothesized that if the exposure to the U.S. flag would reduce prejudice relative to exposure to a neutral image. However, displaying the U.S. flag in a nationalistic context was hypothesized to heighten nationalistic associations with the flag, and as a result, increase outgroup prejudice. Consistent with Butz and colleagues' prior work, analyses indicated that exposure to national symbols did not heighten patriotism or nationalism relatives to the control condition in which participants were not exposed a national symbol. As predicted, participants who were exposed to the U.S. flag reported significantly warmer feelings toward a range of ethnic and religious outgroups relative to those exposed to a neutral image. Additionally, participants exposed to the U.S. flag in a nationalistic context reported warmer feelings toward outgroups than those in the control condition. These results suggest that exposure to national symbols, irrespective of the context in which they are displayed, may promote more positive attitudes toward outgroup members.

Project Dissemination:

Poster Presentation:

Wagoner, M. and Butz, D.A. (2013, April). National Symbols and Outgroup Prejudice, Celebration of Student Scholarship, Morehead State University, Morehead, KY, April.

Awards and/or Honors:

N/A

Post-Graduation Plans (Seniors only):

Graduate program in Experimental Psychology at Morehead State University

Williams, Nolan

Major:

Psychology

Faculty Mentor:

Laurie Couch

Research/Project Title:

Nolan worked on three projects this year. The first was one entitled "Getting Over Betrayal: Links Between Post-betrayal Reactions and Coping for Men and Women" and investigated how coping may serve to help/hinder how men vs. women get over being betrayed by their loved ones. On this project Nolan conducted literature review and statistical analyses, and he prepared and delivered an award-winning poster presentation based on the results. Second, Nolan worked as a secondary author on a paper entitled "Taking Care of Business: Predicting Psychological Resolution After Betrayal." On this paper, Nolan conducted literature review and assisted in the preparation of a poster presentation. In addition, along with another student, Nolan developed a project to compare face-to-face dating relationships vs. long-distance dating relationships. It was entitled "Predicting Success in Long-distance vs. Face-to-face Relationships." In doing so, he conducted a literature review, gathered and evaluated measures of several critical variables, submitted an IRB proposal, wrote/launched a survey on SurveyMonkey, and collected data (including subject pool administration) for the project.

Project Abstract/Summary:

PROJECT 1: Romantic betrayals have been linked to negative health consequences in past research, especially for women. Because understanding coping may be key in reducing such consequences, our study sought to investigate the relationship between coping styles used after betrayal and mental/physical symptoms that were occurring at the time. Surveys were completed by community volunteers who indicated their post-betrayal symptoms and the coping strategies they used to manage their experience. Correlational analyses by sex suggested several coping strategies (e.g., coping through emotional/instrumental support seeking, mental/behavioral disengagement, venting, denial, alcohol/drug use, and suppression of competing activities) were negatively correlated with depression, anxiety, trauma reactions, and stress-related physical symptoms for men; however, few coping strategies were related to health indicators for women.

PROJECT 2: Using particular coping strategies after stressful/traumatic events may help improve event-related mental/physical symptoms and help people to “move on.” So to test links between coping and long-term psychological resolution, victims of interpersonal betrayal were asked to describe their experience, the coping strategies they used to deal with the experience, and the degree of psychological resolution they felt after coping. Regression analysis suggested that using behavioral disengagement, turning to religion, and venting to manage betrayal predicted later psychological “unfinished business,” whereas having used acceptance and emotional support seeking strategies was associated with closure.

PROJECT 3: The second project is ongoing, but considers differences between face-to-face dating relationships and long distance dating relationships in terms of relational confidence, satisfaction, personality, jealousy, technology use, etc.

Project Dissemination:

The project entitled "Getting Over Betrayal: Links Between Post-betrayal Reactions and Coping for Men and Women" was delivered as a poster presentation three times in the Spring of 2013. It was awarded 2nd Place in the Ernest Myer undergraduate research competition at the annual academic conference of the Kentucky Psychological Association. It also was awarded a Certificate of Merit at MSU's Celebration of Student Scholarship, and it was presented (on the regular program) at the Midwestern Psychological Association. The project entitled "Taking Care of Business: Predicting Psychological Resolution After Betrayal" also was presented at the annual academic conference of the Kentucky Psychological Association, at MSU's Celebration of Student Scholarship, and on the regular program at the Midwestern Psychological Association.

Awards and/or Honors:

Nolan’s paper entitled “Getting Over Betrayal: Links Between Post-betrayal Reactions and Coping for Men and Women,” won 2nd place in the Ernest Meyer undergraduate research competition at the annual academic conference of the Kentucky Psychological Association, and it won a Certificate of Merit at MSU’s Celebration of Student Scholarship this spring.

Post-Graduation Plans (Seniors only):

N/A

ACADEMIC AFFAIRS

CAMDEN CARROLL LIBRARY

Kozar, Carter

Major:
Undecided

Faculty Mentor:
Karla Aleman

Research/Project Title:
Library Patron Use of Literature and Language Material at Camden-Carroll Library: A Collection Assessment

Project Abstract/Summary:
As the modern world progresses to an increasingly digitized information society, communication methods, tools, and formats are constantly changing. The Library owns and licenses a wide variety of such material, including books, journals, magazines, newspapers, videos, audio content, databases, eBooks, and much more. Focusing a spotlight on the literature and language material in the Library, Ms. Aleman aims to assess the content, condition, and use of these library materials over time. The undergraduate research assistants will contribute greatly to the assessment by gathering data on the material.

Project Dissemination:

Poster Presentation:
We aim to present our research at one professional library conference, likely one sponsored by the Kentucky Library Association in Spring 2014. We are currently investigating publication options.

Awards and/or Honors:
N/A

Post-Graduation Plans (Seniors only):
N/A

Trenary, Dakoda

Major:
Secondary English Education

Faculty Mentor:
Karla Aleman

Research/Project Title:
Library Patron Use of Literature and Language Material at Camden-Carroll Library: A Collection Assessment

Project Abstract/Summary:
As the modern world progresses to an increasingly digitized information society, communication methods, tools, and formant are constantly changing. The Library owns and licenses a wide variety of such material, including books, journals, magazines, newspapers, videos , audio content, databases, eBooks, and much more. Focusing a spotlight on the literature and language material in the Library. Ms. Aleman aims to assess the content condition, and use of these library materials over time. The undergraduate research assistants will contribute greatly to the assessment by gathering data on the material.

Project Dissemination:
We aim to present our research at one professional library conference, likely one sponsored by the Kentucky Library Association in Spring 2014. We are currently investigating publication options.

Awards and/or Honors:
N/A

Post-Graduation Plans (Seniors only):
N/A

Student Index