



14th Annual

Celebration *of* Scholarship CONFERENCE

April 4 & 5, 2018



 Shawnee State
UNIVERSITY

www.shawnee.edu/cos

Celebrating Students, Faculty, and the Exploration of Ideas

We celebrate student accomplishments every day at Shawnee State University — inside and outside of the classroom — in big and small ways.

For me, two annual events, commencement and the Celebration of Scholarship, get to the heart of what we do here and why.

We prepare today's students to succeed in tomorrow's world.

That requires going beyond learning facts or how to solve an equation. It requires learning how to ask "Why?," "What if?," and, most importantly, "Why not?"

Our Celebration of Scholarship gives us a unique opportunity to come together with our entire community, on and off campus, to showcase the type of creativity, research, and thinking in which our students and faculty mentors are engaged.

I want to thank our students and faculty for showcasing student work — and for sharing your thoughts and ideas.

I hope those visiting us enjoy the variety of presentations.

Go Bears!


Rick S. Kurtz



Celebration of Scholarship grew out of Professor Gary Gemmer's dream to recognize the collaborative spirit of students and their faculty mentors and their involvement with research and creative activities. This is the essence of higher education and the college experience and sets it apart from other educational experiences. Students learning and developing their ability to think critically, to examine, to perform, and to turn those experiences into confidence, careers, and success.

This year, we write another page in the Celebration of Scholarship script — one that is certain to create important experiences for many of our students. We celebrate those students and their work. We celebrate the faculty mentors who share their passion and dedicate their time and expertise toward another generation of scholars. We celebrate the organizers. And we celebrate the energy of inquiry, discovery, and creativity that underpins this unique event — Celebration of Scholarship.


Jeffrey A. Bauer
Provost



Congratulations to every student and faculty member participating in this year's Celebration of Scholarship. The hard work, research, writing, and collaboration in evidence at this event is one of the high points of our academic year.

We always look forward to an exciting day of oral presentations and posters, to discussions that are so engaging they are sometimes carried out to our hallways and beyond.

The sharing of our thinking, our research, our creative work, our questions and more is what continues to make our university the passionate and transformative place that it is. Thank you for being part of this wonderful event.

*Roberta Milliken
Dean, College of Arts and Sciences*

On behalf of the faculty and staff of the College of Professional Studies, I want to welcome you to the 2018 Celebration of Scholarship. This event is a highlight of each academic year and provides the entire campus with the opportunity to recognize, congratulate, and, yes, celebrate the scholarly achievements of our students. This year's program of distinguished guest speakers, student paper and poster presentations, and official presentation of awards will most certainly provide memorable occasions for students, faculty, and guests alike.

Throughout the year, students work under the guidance of a faculty mentor to design, research, and prepare scholarly materials worthy of presentation. The Celebration of Scholarship gives these students the opportunity to present their findings and to engage in thoughtful conversations with peers, faculty, and others about their work.

For the University's undergraduate students it can provide a first opportunity for them to engage in scholarly discourse over a position or an idea presented from their research. This experience will serve them well as they continue their education at the graduate level or as they begin their careers.

For graduate students, the Celebration of Scholarship provides them with the opportunity to share their research with a potentially new and broader audience. These presentations and discussions provide an experience that will serve them well as they move forward in their careers or advanced study.

The kind of faculty and student collaboration that occurs in preparation for and during the Celebration of Scholarship is just one of the things that makes Shawnee State University an OUTSTANDING university. The entire University community is so grateful for the opportunity to congratulate each presenter and to recognize those who are the recipients of an award for their work. Thanks to all who make this event such a productive and rewarding experience.



*Paul Madden
Dean, College of Professional Studies*



On behalf of the faculty and staff of the University College, let me extend my sincere congratulations and welcome you to the 2018 Celebration of Scholarship. Your hard work, dedication and study have truly paid off, and I look forward to learning from you as you share your educational passion with the campus community.

In collaboration with dedicated faculty mentors, our students are producing original scholarly and creative works of the highest quality. As such, The Celebration of Scholarship is a showcase of academic excellence, but beyond that, it is a demonstration of all that our students can achieve at Shawnee State, in their careers, and throughout their lives. I am confident that each of our presenters will continue to demonstrate the insight, passion and dedication needed to produce these works as they graduate and pursue their lives outside of Shawnee State.

It is with great pride and anticipation that the University College acknowledges and celebrates your achievements. Congratulations and good luck!

*Christopher D. Kacir, Ph.D.
Acting Dean, University College*

A Celebration of Scholarship 2018

Welcome to the fourteenth annual Celebration of Scholarship, a conference that highlights the scholarly, creative, and research activities of both undergraduate and graduate students. As we look back over the years, we are encouraged by how much we have grown. The first conference in 2005 was organized under the leadership of Gary Gemmer, Professor Emeritus, with a committee of just two professors, Roberta Milliken and Eugene Burns, and one student, Tracey Leo. It was held in a single day; 60 SSU students presented along with 10 graduates of SSU and 13 visitors from other universities. This year, over 190 SSU students are participating.

The Celebration of Scholarship has fostered an academic culture of discovery and inquiry on campus. The presenters have the rewarding and valuable experience of presenting their scholarship or creative endeavors to student peers, faculty, administrators, and the local community. Our program this year also includes two keynote speakers who will deliver two talks on the theme of research.

We rely on the help of several individuals and organizations to achieve an event of this caliber. First, we thank the students and their faculty mentors who are participating in the conference. Their names are listed in the program. We also celebrate and appreciate the continuous financial support from the SSU Development Foundation. They have been very generous over the years.

Others who supported the event in a number of ways include President Rick Kurtz and his office; Provost Jeff Bauer and his office; Dean Milliken of the College of Arts and Sciences and her office; Dean Madden of the College of Professional Studies and his office; Dean Kacir of the University College and his office; SSU Printing Services; Jennifer Schackart and the SSU Event & Conference Services; Janet Stewart and the Clark Memorial Library; SSU Office of Marketing & Communications; Sharon Messer; Pat Spradlin and the Teaching & Learning Center. I would also like to give a special thanks to our community partners for their generous donation of gift cards for door prizes.

Our gratitude and appreciation go out to all who helped with set-up, organization, and awards for their assistance and encouragement.



Aaron Bruewer

The Coordinating Committee

Aaron Bruewer, Chair

Catherine Bailey

Kim Inman

Leila Lomashvili

Barry Lucas

Jennifer Napper

Alberto Poxes

Marc Scott

Mistie Spicer

SSU Board of Trustees' Award for The Celebration of Scholarship

The SSU Board of Trustees has established a Trustees' Award as part of the Shawnee State University Celebration of Scholarship. The award is for outstanding research that is investigative, project-based, inquiry-based, open-minded, and/or exploratory. The winner of this award receives a scholarship in the amount of \$1,000.

As former Board chair, Dan Mooney stated, "As trustees, we are extremely proud of the students who participate and present their work — and the faculty mentors who help make it all possible."

SSU Excellence in the Humanities Award for The Celebration of Scholarship

This year the first Excellence in the Humanities Award is being offered to students who submit their investigative, project-based, inquiry-based research in the Humanities for consideration. The winning student will receive \$500 and the runner up will receive \$250.



Program at a Glance

Wednesday, April 4, 2018

- 11 a.m. – 4 p.m. Registration (Massie Hall Lobby, 1st Floor)
- Noon – 12:50 p.m. Oral Presentations, Session 1
- 1 – 1:50 p.m. Oral Presentations, Session 2
- 2 – 2:50 p.m. Oral Presentations, Session 3
- 3 – 3:50 p.m. Oral Presentations, Session 4
- 4 – 5 p.m. Poster Session (Morris University Center Lobby)
- 4 – 6 p.m. SSU Board of Trustees' Award Session (Clark Memorial Library 204)
Humanities Award Session (Clark Memorial Library 207)
- 6:15 p.m. Provost's Dinner (for presenters, mentors, and moderators; Morris University Center, Sodexo Ballroom)
- 7:30 p.m. Welcoming Remarks
Dr. Jon Hitchcock, Keynote Speaker*
New Frontiers in Social Science Research: Using "Heavy Data" to Re-Think How We Generate Knowledge
Open to the Public

Thursday, April 5, 2018

- 8 – 9 a.m. Registration (Massie Hall Lobby, 1st Floor)
- 9 – 9:50 a.m. Oral Presentations, Session 5
- 10 – 10:50 a.m. Oral Presentations, Session 6
- 11 a.m. – Noon Dr. Jill Bradley –Levine, Featured Speaker* (Morris University Center, Sodexo Ballroom)
Translating Research into Practice
Open to the Public
Awarding of Door Prizes**
- Noon – 2 p.m. Campus Picnic (Massie Hall Lawn; rain location: Morris University Center, Sodexo Ballroom)

* Conference participants—attendees and presenters—receive five tickets with attendance at speaker presentations for a chance at a door prize.

** Attendees should receive a ticket after each session. The more sessions you attend, the more tickets you will receive. The drawing takes place in the Morris University Center's Sodexo Ballroom immediately after the speaker. The winning ticket MUST be presented at the time of the drawing.

1A UNC 214
Moderator: Adair Carroll

Emily Dunham, Kylie Berry, Staci Davis, Crystal Holtgrewe, & Chimdiya Nosiri, Matt Penix, Cody Redman, Deborah Smith

Mentor: Adair Carroll

Addressing Health Literacy Needs to Promote Positive Patient Outcomes I

Health literacy is defined as the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions (Health.gov, 2017). Unfortunately, a large number of the American population has low health literacy skills coupled with low socioeconomic status, resulting in a rise of individuals experiencing health outcomes. The professional nurse plays an integral role in educating clients and their family members. Students will report on evidence based practice related to assessing clients' health literacy skills and the teaching interventions students provided to clients to improve their health literacy and overall outcomes.



1B UNC 215
Moderator: Amy France

Jacob Blair, Chase Meade, & Noah Braden

Mentor: Amy France

Respiratory Therapy Case Study

Students in the Respiratory Therapy program regularly respond to case studies each semester. This group will present a case study about an individual who has Myasthenia Gravis and Asbestosis. They will discuss a treatment plan they have developed and focus on patient conditions, teaching those in attendance about various processes of the disease.



Michelle Wampler, Lesleigh Sexton, & Adam Pate
Mentor: Amy France

Effects of Burn Trauma on the Respiratory System

Students in the Respiratory Therapy program regularly respond to case studies each semester. This group will present a case study of a patient's burn trauma and its effects on the cardiopulmonary system. They will discuss a treatment plan they have developed and focus on patient conditions, teaching those in attendance about various processes of the disease.



1C LIB 204
Moderator: Jodi Dunham

Diana Paola Piedra Moreno

Mentor: Aaron Bruewer

Conceptions Regarding Relationships between Democracy and Mathematics Curriculum

An understanding of a critical connection between mathematics education and democracy makes possible that teachers and students build social transformations from the awareness of injustice, inequality and privilege. However, to do so, future research in critical mathematics education curriculum is needed. This presentation explores the advances of a research that seeks to identify some conceptions of mathematics teacher candidates regarding mathematics curriculum for democracy and analyzed how those are a personal and professional construction related to their social democratic experiences and their college education. Democracy, democratic school and the role of curricular studies in mathematics for democracy are main areas of the literature review. The methodology used is qualitative narrative, the method of data collection is in-depth interviews. The participants are five mathematics teacher candidates.



Katie McIntosh

Mentor: Aaron Bruewer

Understanding Student Perceptions of Belonging in the Middle School

In school and society, people need to feel like they belong. I will present a review of recent literature on what creates student sense of school belonging and how to use the findings to promote development of belonging. Ultimately, teachers must use their knowledge of the development of school belonging and those influences on it to implement tools that create a safe and positive school and community culture. I entered this research with an intense focus on how students feel in their school and classroom contexts, and I have found that implementing an advisory group has potential to aid in creating student sense of connectedness.



Madeline Girts

Mentor: Scotty Thompson

Changing the Way Math Curriculum is Presented: An Action Research Project

Through an action research project, I used various methods to present Ohio Geometry State Standards to a 10th grade geometry class. With Howard Gardner’s Multiple Intelligence Theory in mind, I centered lessons around these 8 ideas in an attempt to gain more student involvement in the classroom and higher turn in rates of daily homework assignments.



1D LIB 207

Moderator: Karen Koehler

Samantha Budd

Mentor: Elizabeth Wood

Islam and Democracy: How Democracy is Compatible with Islam

This presentation will cover the six components of a democracy: participation, developmentalism, protection, performance, pluralism, and secularism. The Quran, Hadiths, and early Islamic history from the time of the Prophet Muhammad (saw) to the death of the fourth of the Rightly Guided Caliphs. These sources will be used with each of the six components of democracy to show the compatibility of democracy with Islam.



Ryan Dosser & David Jaeger

Mentor: Dan Johnson

The Ethics of Transhumanism

This presentation analyzes Transhumanism, an ideology stating that humanity can and should go “beyond” itself to become something more than human, using Aristotelian virtue ethics and definitions of what makes something ‘good’. By comparing Transhumanist ideals with Aristotle’s ideas of what makes something flourish, this presentation examines the ethics of Transhumanism, pondering questions of whether or not it is right, good, both, or neither.



Delinique Barber

Mentor: Elizabeth Wood

Are We Beyond Race?

A discussion on the concept of post-racialism and if the millennial generation is beyond it. Issues of police brutality, micro-aggressions, and stereotyping factor into this discussion about if race can become a socially arbitrary category.



1E MAS 108

Moderator: Michelle Moohr

Devin Jenkins

Mentor: Kejing Liu

Does Segmentation Promote Phonemic Awareness

My study takes place in a kindergarten classroom, and I am currently finishing up conducting research on whether or not phonemic segmentation promotes inventive spelling.



Chelsea Bobst

Mentor: Kejing Liu

Effectiveness of Parental Involvement in the Classroom

The presentation will discuss how effective parental involvement is in the classroom. Parental involvement can either be positive or negative when it comes to student achievement. Effectiveness will be discussed based on the data collected from the classroom. Ways to get parents involved will be discussed as a way to get educators in communication with parents/guardians. Results of the study will be explained by showing what was done was either ineffective or effective.

**Kimmy Morgan**

Mentor: Kejing Liu

The Effects of Parental Involvement on Academic Success

This presentation will focus on the effects parental involvement has on the academic success of six children in an early childhood classroom. The presentation will highlight the research and methodology used to complete this action research topic as well as an overview of the data collected. This presentation will also include a brief discussion about research that has already been conducted on this very topic and how it relates to the data collected throughout this action research.

Oral Presentations**Session 2 1 – 1:50 p.m.****2A UNC 214**

Moderator: Adair Carroll

Raigan Pyles, Aleah Clark, Derrick Dillow, Tori Harr, Madison Osborne, Amy Lore, Kari Skeens, Stacy Wheeler, & Carrie Wynn

Mentor: Adair Carroll

Addressing Health Literacy Needs to Promote Positive Patient Outcomes II

Health literacy is defined as the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions (Health.gov, 2017). Unfortunately, a large number of the American population has low health literacy skills coupled with low socioeconomic status, resulting in a rise of individuals experiencing poor health outcomes. The professional nurse plays an integral role in educating clients and their family members. Students will report on evidence based practice related to assessment of clients' health literacy skills and the teaching interventions students provided to clients to improve their health literacy and overall outcome.

**2B UNC 215**

Moderator: Amy France

Alexis Witter, Paige Bentley, & Josh Wilfong

Mentor: Amy France

Respiratory Therapy Case Studies

Students in the Respiratory Therapy program regularly respond to case studies each semester. This group will be presenting a case study about a 42 year old male on CMV. They will discuss a treatment plan they have developed and focus on patient conditions, teaching those in attendance about various processes of the disease.



Levi Little

Mentor: Aaron Bruewer

An Analysis of Cooperative Learning

This presentation will be over the first 3 chapters of my Capstone paper for education. The chapters, in order, are the introduction, literature review, and methodology. The literature review included research on cooperative learning strategies, focusing on which were effective/ineffective, and found an area that seemed to be inconsistent within the research, namely, whether to group students in mixed or like ability groups. The methodology outlines an action research process through which to discover which grouping method works better. Whatever results are found will be analyzed separately for boys, girls, advanced students, struggling students, and the class as a whole.

Jess Patrick & Brittany Stout

Mentor: Scotty Thompson

Making Math Interesting

Changing student attitudes towards mathematics education through implementation of project based learning. What actions can teachers take to create a more positive outlook to the mathematics classroom?

Annie McFarland

Mentor: Aaron Bruewer

Collaborative Learning and Math Motivation in the Middle School Classroom

This presentation will review literature findings regarding the effects that collaborative learning has on motivation in the math classroom. The research stemmed from a persistent issue observed in the rural Midwest middle school classroom, driving a purpose for my research and plan of action for the study. The research explores the themes of collaborative learning, technology, goals, purpose/meaning of content, and the social exposure in group work, all while discussing the relationship to student motivation. The plan of action for my study was then developed from the gap in research of how teacher-selected grouping strategies affect students' math motivation.

Mallory Spencer

Mentor: Phil Blau

Exponential and Logistic Models for Population Growth

We present two models for analyzing population growth. The first is exponential, where growth is unlimited. The growth rate of exponential equations is proportional to the size of the population. The other is the logistic model, where there is a carrying capacity. The growth rate of the model is highest when the population is at half of the carrying capacity, and is slowest when the population is near zero or near carrying capacity.

Derrick Mershon & Tyler Stidham

Mentor: Eugene Burns

Bordetella Biofilms and Their Interaction with Oral Microbiota

Bordetella pertussis and Bordetella parapertussis cause respiratory infections such as whooping cough. Oral microbiota may inhibit growth of pathogens and prevent disease. This study tested if normal throat microbiota can inhibit growth of Bordetella pertussis and Bordetella parapertussis. Streptococcus mitis, Streptococcus salivarius, Streptococcus oralis, and Lactobacillus rhamnosus were used for the throat microbiota. These bacteria were grown in single species biofilms, the growth of which can be seen by light microscopy. Biofilm formation can be verified via antibody assay and/or staining. Some of these bacteria do not attach well to the plastic wells of the microtiter plate, therefore the cells are washed away and do not form biofilms. This problem was resolved by using gelatin to allow the bacteria to more easily attach. Multispecies biofilms were grown to see if these bacteria would grow together and to determine if some bacteria would inhibit growth of other bacteria.

Noah Wickerham & Martin Holsinger

Mentor: Eugene Burns

Bordetella Bronchiseptica and Bordetella Avium in Animals of Southern Ohio

Bordetella bronchiseptica and *Bordetella avium* are gram-negative rods that are the causative organisms of many respiratory infections in animals. These infections include kennel cough in dogs, rhinitis and conjunctivitis in cats, snuffles in rabbits, bordetellosis manifesting as various upper respiratory tract infections in birds, and atrophic rhinitis in pigs. While the diseases are well understood, the reservoirs of *B. bronchiseptica* and *B. avium* in southern Ohio are not definitively known. The purpose of this research is to find animal(s) that can be considered reservoirs for *B. bronchiseptica* and *B. avium*. Blood samples and tracheal swabs were taken from a variety of animals and analyzed using ELISA and PCR testing, respectively.

2E MAS 108

Moderator: Michelle Moohr

Garrett Scowden

Mentor: Logan Minter

Novel Propagation Methods of Humulus Lupulus in Southeastern Ohio

A growth comparison study involving *Humulus lupulus* (c.v. Nugget) vegetative cuttings was conducted to compare effects of three rooting treatments (indole rooting hormone, mycorrhizae, and no treatment [control]) and two media substrates (potting mix and perlite). Specimens were placed into four 48-cell trays (192 total). Each tray was held in an isolated bug dorm. Two cell trays contained standard potting mix and two contained perlite. Notes and measurements were recorded weekly and dead specimens removed to be inspected for root growth. At the end of the ten-week observation period, final measurements were taken and all specimens were pulled from their substrate to be inspected for root growth (length and width). Statistical analysis was conducted on growth rate based on individual treatments and interactions. Mycorrhizae had the highest growth rate as well as the most root development. No specimens survived rooting hormone treatment and few remained viable in the potting mix.

Emily Meddock

Mentor: Kejing Liu

Trapped on Science: Digging Deep into Learning

Early Childhood Curriculum is based primarily on math and reading content areas, leaving out important information in science. It's no surprise that students learn in multiple ways at different rates. By eliminating content areas, educators are harming students' full learning potential. The purpose of this study is to explore the gaps between not learning science and student learning outcomes, by examining students' academic growth by integrating this content into early childhood curriculum. By filling in the gaps with integrated curriculum students and teachers will be able to improve test scores and actively engage during learning time.

Tiffany Knauff

Mentor: Kejing Liu

Inquiry in Kindergarten

Inquiry in Kindergarten involves the journey of science inquiry integrated within the kindergarten classroom. The study focuses on the active involvement students present when studying by inquiry verses that of seat work.

2F MAS 109

Moderator: Erik Larson

Ashley Fox

Mentor: Kejing Liu

Effects of Positive Teacher Student Relationship on Learned Helplessness

The research being conducted is completed in a public school second grade classroom in rural Southern Ohio. The research is to determine if there is a correlation between positive student teacher relationships on learned helplessness. The study is being based on questionnaires students fill out at the beginning and end of each week, assessing their feelings of helplessness or ability to control their situation.

LeAnn Hackworth

Mentor: Kejing Liu

The Effects of Teacher-Student Rapport on Classroom Behavior and Learning

This presentation discusses the effects of the importance of the relationship between students and their teachers. Specifically, the study examined the impact of the relationship students have with teachers on the overall behavior of the class and the students' academic achievement. The primary researcher in this study also examined the results of a rapport building strategy that was introduced in the middle of the study to observe the effects the strategy had on rapport, behavior, and student learning.



Bobbie Jo Bricker

Mentor: Kejing Liu

How Do Individualized Education Plan (IEP's) Affect Students' Self-Esteem, Confidence, and Motivation to Learn?

The research question I am studying is: How do individualized education plan (IEP's) affect students' self-esteem, confidence, and motivation to learn? The purpose of this study is to observe and recognize how IEP's affect students' performance. Based on my observations the students with IEP's lack those three qualities while completing daily tasks and assignments. During my presentation, I will discuss the data I collected throughout the semester, such as the attitude surveys, monitoring student's grade reports, and implementing a reward system. I will then review the data collection results up until the end of the semester.

Oral Presentations

Session 3 2 – 2:50 p.m.

3A UNC 214

Moderator: Rhoni Maxwell-Rader

Brooke Ballis

Mentor: Daniel Finnen

Microwave Assisted Synthesis of Benzimidazoles Using Aromatic Aldehydes

Benzimidazoles are an important class of nitrogen containing heterocycles that are found in many natural products, pharmaceuticals, and dyes. A number of benzimidazoles have been synthesized by condensing

aromatic aldehydes with various di- and tri- amines. Many of these compounds exhibit desirable optical properties such as those required for organic dyes, organic LED's (OLED's), and dye sensitized solar cells (DSSC's). Several reports have also shown that such compounds may be useful as chemosensors, specifically as anion sensors. This research focused on developing a concise synthetic procedure in order to efficiently produce highly conjugated benzimidazole systems so that their optical properties could be evaluated. This presentation will report on the progress of new compounds that have been synthesized using 9-anthraldehyde with various diamines heated in a conventional microwave oven with an ammonium chloride catalyst. In addition, the subsequent UV-Vis and fluorescence spectroscopic studies of these compounds will be presented.



Brooke Ballis & Michaela Garner

Mentor: Derek Jones

Sonogashira Coupling on Aryl Halide Compounds

Sonogashira Coupling is a cross-coupling reaction used in organic synthesis of metal-catalyzed carbon-carbon bonds to generate arylalkynes and is performed with a palladium catalyst, a copper (I) co-catalyst, and an amine base. The reaction requires anhydrous and anaerobic conditions. The reactions carried out so far have used iodocorranulene, bromobenzene, and bromotoluene as the aryl halide source and are carried out through microwave technology with varying reaction times ranging from ten to twenty minutes. The characterization of the products is performed by Nuclear Magnetic Resonance spectroscopy (NMR) and Gas Chromatography-Mass Spectroscopy (GC-MS). These characterizations have shown homocoupling of the alkyne, which is referred to as Glaser-Hay Coupling. This issue is evaluated through repeated trials in attempt to better the anaerobic conditions through the process of degassing using Argon. Improvement of anaerobic conditions and increased reaction time should show an increase of percent yield.

3B UNC 215

Moderator: Amy France

Marcena Sanchez & Kennedy Bee

Mentor: Amy France

Respiratory Therapy Case Study

Students in the Respiratory Therapy program regularly respond to case studies each semester. This group will present a case study of a 70 year old female, admitted to the hospital for shortness of breath. She has underlying problems of cancer, fluid in the chest, and lung collapse. They will discuss a treatment plan they have developed and focus on patient conditions, teaching those in attendance about various processes of the disease.

3C TED 124

Moderator: Kim Cassidy

Darbie Jenkins

Mentor: Kejing Liu

Increasing Oral Segmenting in Phonemic Awareness through Active Participation Intervention

This presentation will explore active participation interventions in phonemic awareness and oral segmenting. The presenter will also discuss the question on whether or not such interventions correlate with a child's success in oral segmenting.

Erin Brammer

Mentor: Keijing Liu

Increasing Reading Levels with Various Forms of Intervention

In this study, the primary researcher will look at increasing reading levels with various forms of intervention. This presentation will start by looking at some of the causes of low reading levels. Then, the presentation will go into depth about the various forms of intervention that will be implemented. Next, the presentation will go into detail about how the forms of intervention were incorporated throughout the course of the study. Finally, the primary researcher will wrap up the presentation.

Monica Colley

Mentor: Kejing Liu

Differentiated Instruction in Elementary Response to Intervention Groups

This presentation will verify whether there is a significance between differentiated instruction in (reading) response to intervention (RTI) groups and student achievement. Specifically, the presenter will attempt to identify the influence of such a connection in struggling readers in an elementary classroom. We will dive into a variety of differentiated teaching strategies and how to apply these teaching strategies to RTI groups of all subjects, with an emphasis on reading. Higher fluency scores and interest levels will be anticipated with the application of differentiated instruction in elementary RTI groups.

Mallory Messer

Mentor: Kejing Liu

Pedagogical Approaches and Motivation

This presentation will discuss a study completed in a third grade classroom to determine which types of pedagogical approaches (teaching techniques) are more effective in increasing student motivation. The study was intended to raise motivation in students, but to also determine if there is a correlation between motivation and student grades. Throughout the course of two nine-week intervals, assignment grades and motivation surveys were collected. This information helped the primary researcher determine a correlation.



Felicia Jennings

Mentor: Kejing Liu

Does Project Based Learning Affect Student Focus?

This action research project was designed to focus on student motivation and focus in the classroom. As the primary researcher, I wanted to see if changing the instruction style in the classroom to project based learning would help my students become more engaged and motivated to learn.



Chelsea Rice

Mentor: Kejing Liu

Does Confidence Affect Motivation?

The purpose of this study is to determine how confidence affects motivation in a kindergarten class. Chapters One, Two, and Three will be presented. Based on my observations, the students in this class lacked the confidence to face a challenge or feel as though their work was good enough. In the presentation, I will review the baseline data that I collected using the smiley face survey by Sam Krueger, discuss the intervention and self-confidence building activities that will be put into place, and discuss the data collection results up to the point of the Celebration of Scholarship.



Kaylie Ruckel

Mentor: Kejing Liu

Sight Word Intervention

This presentation shows the efforts taken for sight word intervention in a kindergarten class room. This includes pulling students to work on letters, letter sounds, and sight word recognition. The purpose of this study is to provide teachers and parents with strategies they can use in any setting to help with early reading development. The two strategies being researched are basic flash cards and a flash card repetition game.



Bridgette Scaggs

Mentor: Kejing Liu

Word Recognition Action Research

This action research topic studies three different word recognition strategies with a group of kindergarten students. The study is identifying strengths and weaknesses with the strategies, and which strategies had better results. The data was collected over a 10 week period.



Abdulrazzaq Alanazi

Mentor: Gay Lynn Shipley

Motivational Strategies in Language Instruction

In the context of foreign language classroom teaching, this study will provide a specific overview of the self-regulated learning and language learning strategies along with other relevant concepts and theories. Various parties have gained interest in motivational approaches in language instruction learning such as the involvement of government, educational institutions, and foundations in setting up various program.

4A UNC 214
Moderator: Linda Hunt

Garett Blair
Mentor: Aaron Bruewer

The Effect of Classroom Discussion on Student Achievement

This presentation will discuss research completed on the topic of Classroom Discussion. The elements of Classroom Discussion that will be discussed are different educational strategies, class management, and student motivation.



Tyler Edler, Alexandria Hatfield, & Cori Conley
Mentor: Aaron Brewer

Improving the Modern Classroom

This presentation outlines three proposals for research in which we suggest ways to improve today's classroom environments. Topics include motivation, homework, and classroom management. This presentation, presents the first three chapters of the action research plan in order to encourage academic involvement from these findings.



Dakota Sparks
Mentor: Aaron Bruewer

Student Engagement

I will be presenting my Action Research Project where I used different teaching strategies in my student teaching classroom to see if they would impact how engaged my students felt. I also tracked students' engagement levels to see if their engagement had a correlation to their academic achievement.



4B UNC 215
Moderator: Amy France

Emily Fulks & Cody Charles
Mentor: Amy France

Respiratory Therapy Case Study

Students in the respiratory therapy program regularly respond to case studies each semester. This group will present an overview of case study on a patient that has been intubated and extubated several times over short period, all being different reasons. They will discuss a treatment plan they have developed and focus on patient conditions, teaching those in attendance about various processes of the disease.



4C TED 124
Moderator: Kim Cassidy

Veronica Hayslip
Mentor: Kejing Liu

Improving Student Handwriting in the Classroom

This study focuses on strategies to improve handwriting in the classroom. The presentation will review chapters 1-3, which discuss the difficulties I observed in the classroom, the strategies that had been implemented, and the interventions that I plan to implement to improve handwriting in the classroom.



Kourtney Arnold
Mentor: Kejing Liu

Effects of Music and Movement on Classroom Behavior

Many researchers have recognized that exercise and music are beneficial for children's physical health, but do these factors influence students' classroom behavior? In this study, the primary researcher plays music and movement songs for a kindergarten classroom and monitors their behavior throughout the day. The class will participate in music and movement activities every other day and their behavior will be recorded every single day. The data will be analyzed to see if the

students had better behavior on days that they participated in music and movement activities.



Hannah Price

Mentor: Kejing Liu

The Effects of Integrated Movement and Physical Activity on Students' Comprehension and Behavior

It is recommended that students participate in physical activity and movement for a minimum of one hour each day. Research has also shown that physical activity (recess, gym class, etc.) and incorporating large body movement into the classroom improves students' comprehension, focus, and behavior. This presentation will discuss steps that could be taken in order to evaluate the effects of physical activity and incorporating large body movements into instruction on student comprehension, focus, and behavior.



4D TED 126

Moderator: Kejing Liu

Lauren Rhoads

Mentor: Kejing Liu

Behaviors of the Classroom

The researcher has been studying different students in their classroom and looking into ways to work with students who have emotional breakdowns, behavior outburst and students who are not able to sit still during a teaching. The researcher has found, different techniques that work for students, but also how the researcher can assist other students in the future.



Sara Campbell

Mentor: Kejing Liu

Improving Emotional Intelligence in Kindergarten Students

This presentation gives an overview of a research project conducted for Senior Capstone. Primarily, it focuses on the principal researcher's reasons for conducting the study, the research design and methodology, as well as their review of relevant literature. The primary aim of the study is to raise the emotional intelligence of eleven participating kindergarten students. The presentation will also cover preliminary research findings from the study.



Maria Allison

Mentor: Scotty Thompson

Discipline and Management Strategies in the Classroom

This presentation will discuss the challenges teachers face in the classroom regarding misbehaviors. Dealing with multiple misbehavior issues leads to a high increase in teacher burn out, distracts students willing to learn and focus, and hurts the classroom environment. This presentation addresses these issues and recommends good practices to use for decreasing misbehaviors in the classroom. Literature has been reviewed and it suggests having strong classroom management skills decreases misbehavior. I will present strategies to improve the classroom environment and proper ways to handle discipline.



4E LIB 204

Moderator: Erik Larson

Hayley Venturino

Mentor: Kejing Liu

Benefits of Journaling in an ECE Classroom

The purpose of this study is to discover the benefits of daily journaling in an ECE classroom. The study will be a self contained study where the participating students will journal during the last twenty minutes of the school day. The results will be garnered by measuring the students' assessment scores on two pre and post assessments. During the three weeks of daily journaling, the students will be given a different prompt to write on each day. Some days will have open ended prompts, while some are more constructed. I will not be assisting the students in the spelling of words during the journaling process. The students will be instructed to sound out words that they do not know.



Hadyn Schmidt

Mentor: Kejing Liu

A Study on Promoting Conversation, Speaking, and Listening Skills in a Controlled Setting: Using Guidelines to Build Meaningful Classroom Discussions

The purpose of this study is to explore the effectiveness of two types of discussion-based learning in regards to student learning, and student and teacher preference in a primary classroom. These two methods are structured vs. unstructured. During the structured discussion, students will be expected to follow a list of rules and guidelines that govern the discussion. During the unstructured discussion students are able to answer and talk freely. This study will determine which method is most effective and helpful for student learning and success, as well as which method students and teachers prefer to enhance learning within the classroom.

Mykalley Detty

Mentor: Kejing Liu

Does Technology Integration Have a Positive Impact on Students' Attitudes Towards Learning?

This study is designed to see if technology integration has a positive impact on students' attitudes towards learning. Technology will be implemented into the classroom periodically. Each time, after we use some type of technology, a survey will be given to all the students. The survey will ask the students if they enjoyed using this technology, somewhat enjoyed the technology, or did not enjoy the technology at all. Survey answers will be documented anonymously, and kept confidential. The purpose of this study is to see if students are actually enjoying the technology society is pushing up to implement into the classroom.

4F LIB 108

Moderator: Dan Chaffin

Allison Higgins

Mentor: Kyle Vick

The Effects of Mimicry on Self-Efficacy

The purpose of this project is to research the effects of mimicking on the mimicker's self-efficacy, or the belief that he can succeed. In this project their self-efficacy would be measured in relation to the act they are mimicking.

Melissa Ashton & Adrienne Carver

Mentor: Scotty Thompson

Research Based Best Practices in a 9th Grade English Language Arts Classroom

This presentation will be the research findings of two pre-service educators in their 9th grade field placements. One presentation focuses on the best practice for engagement during read alouds. The second pre-service teacher's presentation is an interpretive self-assessment of the importance of self-efficacy in pre-service teacher effectiveness in a 9th grade classroom.

Bailey Horsley

Mentor: Leila Lomashvili

The Jaws of Justice: The Dog Behind the Teeth

In this research report, the life and dangers our K-9 officers are facing on a daily basis are explored through the interviews with the human officer, scholarly research, and video material associated with the training of these smart creatures. It shows how the specific species of dogs are used for a variety of jobs not only in law enforcement but in the medical field as well. Besides the above points, the history of K-9 use in European countries and then in America is discussed as a background and dogs' training, pairing with a human officer, bonding, in-field experiences, and off-duty responsibilities are all woven together in a very interesting and intriguing way to create a strong argument about the psychological nature of these species. Interestingly, the theoretical research is interleaved with the excerpts from an interview (empirical support) with the police officer who is paired with the K-9 officer. Must see presentation!

Autumn Hodge

Mentor: Kyle Vick

Emotional Intelligence and Auditory Stimuli

This study will look at the neural response of an auditory stimulus, seeing if this can lead to an empathetic response like that of emotional intelligence. This is a follow up study; the sound stimuli has changed from object noises, to man-made sounds. These neural responses can be applied to video game design and how we react to the different stimuli in video game.

Sarah Benner & Lana Percell

Mentor: Kyle Vick

Brain Responses of Women to Erotic Imagery

In our study we will be examining in which brain region women process erotic imagery. We are basing our study on a previous study that looked at just heterosexual men. This study however, said nothing about how women process these images. We used 15-20 females of college age and the electroencephalogram to collect data. We are conducting this study as a participant blind study so they can not knowingly affect the results. The consent form however, does warn them that they will be viewing images that contain nudity. We are masking the experiment as a study to how the brain processes words versus images. We will display images in the four categories: faces, erotica, words, and tools. The data collected from these women will give us an insight into the female brain to see if they process erotic images like their male counterparts or not.

Savannah Nelson, Ashlyn Cassidy, & Alannah Bihl

Mentor: Brian Richards

Lifelab

Lifelab is a website created by students and faculty of SSU. It is based on prior research that suggests that well-being can be increased by small changes in daily habits. Its purpose is to measure whether activities that fall within particular categories in an online setting increase well-being. Lifelab's four categories of inquiry are transcendental, social, recreational, and personal growth. Researchers are also looking at how levels of motivation, interest, and social acceptance factor into the results. The sample of participants is made up of SSU students. This project began in the spring semester of 2017 and will continue to evolve after the current group of student researchers graduate. The website programming portion of Lifelab was funded by Shawnee Student Research Experience.

Chelsi Wilson, Allison Gineman, Alexis Overton, & Christopher Andrew Adams

Mentor: Christine Raber

A Systematic Program Evaluation of an Innovative Community Safety Initiative: The Senior Home Information Program

Presentation will discuss our research and findings of our study. The major aim of this study is to fully describe the Senior Home Information Program which is currently offered in Ross and Scioto counties in Ohio, including its outcomes for participants, occupational therapists, and team members. The completion of a systematic program evaluation assesses the programs' strengths, areas for improvement, and provides data for future growth and development of this innovative community based safety initiative for older adults in southern Ohio.

Ronald Emmons & Dylan Carpenter

Mentor: Daniel Finnen

Microwave-Assisted Synthesis of Polybenzimidazoles for Use as Analytical Sensors

Benzimidazoles are a diverse family of nitrogen containing heterocyclic compounds that are found in many naturally-occurring biomolecules, pharmaceuticals, and many other products. Most common benzimidazole synthesis involves the condensation of a carbonyl containing compounds with o-phenylenediamine; however, these synthetic methods

require long reaction times involving high temperature refluxes and cumbersome workups. This research developed a simpler synthetic procedure with shorter reaction times by using polyaminopolycarboxylate carbonyls, a small pressure vessel, conventional microwave oven, and boric acid catalyst. Reaction times were reduced from the typical 24-hour reflux to 1-hour or less using the microwave on low power and the desired product was easily isolated. This presentation will focus on the current investigations involving the optical properties of the polybenzimidazoles DTPB, TTHB, and others including the UV-Vis and fluorescence spectroscopy under both acidic and basic conditions, as well as with both cations and anions.

Humanities Award

Special Session 4 – 6 p.m. LIB 207

Anna DeHart

Mentor: Pablo Salinas

Marrying the Church: How Maria Luisa Bemberg Fought Marianismo Through Film

In this presentation, I argue that Argentine director Maria Luisa Bemberg uses film to challenge the values of Marianismo engrained in Latin American society during the time of her films' productions. Through the analysis of formal elements and the use of the Bechdel test throughout *Camila*, (1984) and *Yo, la peor de todas* (1990), I prove that Bemberg's stories portray Latin American women's fight for equality toward the patriarchal societies where both protagonists lived. The use of camera angles and color in the rain scene, and sound and mise-en-scene in the scenes with church bells will convey imagery of natural and cultural obstacles in each movie. In order to understand the type of women living and fighting these difficulties, I will investigate the importance of the Bechdel test in determining how much these films challenge the patriarchal society in which the stories are set and the conventions of commercial film.

Brent Rowland

Mentor: Brian J. Richards

Implications of Philosophical Perspectives for Moral Reasoning

People differ in their philosophical perspectives when making moral judgments. Two common perspectives are moral relativism and religious perspectives. The present study found that philosophical perspectives were associated with filtering questions about right and wrong through moral foundations differently. These results have implications for moral reasoning.

Kaleb Burchett

Mentor: Andrew L. Feight

Williams Manufacturing Company: Portsmouth, Ohio's Final Shoe Factory

This presentation focuses on the final years of Williams Manufacturing Company. Williams' was the final shoe factory to shut down in the area, thus marking the end of Portsmouth, Ohio's once great industry.

SINGLE PRESENTERS

Moderators: Leila Lomachill & Alberto Poxes

Rebecca Boyd

Mentor: Erik Larson

Timing of Expression of Progradational Collapse Blue Holes in the Bahamas: Examples from Eleuthera

The purpose of this study was to determine when blue holes were expressed at the surface through progradational collapse. Petrographic thin sections were made from samples of cap rock belonging to four progradational collapse blue holes on Eleuthera. These thin sections were analyzed to determine whether the depositional environment of the cap rock was subtidal or eolian, so that a maximum age for expression at the surface could be determined. The cap rock of all four blue holes' were composed of subtidal facies, which suggests these blue holes were expressed at the surface post MIS-5e, <120,000 years ago. However, previous studies suggest the expression of blue holes occurred >300,000 years ago based on speleothem dating. In part due to this contradiction, more research is needed to better understand when the expression of progradational blue holes occurred.

Alexis Conley

Mentor: Kimberly Inman

Molecular Cloning of Chicken *FOXC1* for Gene Expression Analysis

During early embryonic development, neural crest cells (NCCs) migrate into many regions of the vertebrate embryo, including the pharyngeal arches. Once in the pharyngeal arches, NCCs generate most of the cartilage, bone, and connective tissue of the head and face, including the jaw and middle ear bones. Analysis of jaw and middle ear development in a mouse model has indicated the requirement of *FOXC1* gene expression for development of both structures in mammals. The jaw joint in mammals differs from other gnathostomes, with the middle ear bones in mammals being homologous to the jaw joint in other organisms (the chicken, for example). This research aims to discover if *FOXC1* plays a role in proper formation of the jaw joint in non-mammalian gnathostomes. We have begun the process of amplifying the *FOXC1* gene in order to create a timeline of gene expression in the developing chick embryo.

Lauren Duncan

Mentor: Scotty Thompson

The Importance of Positive Reinforcement in School

This action research project will portray the increase in student's academics and behavior when positive reinforcement is implemented within the early childhood classroom through various techniques. Techniques include positive notes home to parents, moving behavior clips up on the classroom behavior chart as well as student work being displayed on the classroom brag board. Academic grades will be examined prior to positive reinforcement being implemented within the classroom as well as after positive reinforcement is implemented within the classroom. A pre-assessment on student's overall attitude about school will be given to students before the positive reinforcement is implemented. A post-assessment will then be given on student's overall attitude about school after positive reinforcement is implemented. The results will display if student's overall attitude about school increases when there is positive reinforcement and an increase in student's academic grades.

Zachary Fryman

Mentor: Scotty Thompson

Warm-Ups in the Classroom

This presentation displays the topic of my Teacher Education Capstone project. It includes several steps of the action research process. My task was to initiate change in the classroom that would enhance both teaching and learning. I recognized a problem in the classroom that needed to be addressed. Valuable instruction time was being wasted at the beginning of each class period as the instructor waited for students to cease their conversations and visiting with peers. I took an action to solve this problem by initiating warm-up activities. This provided students with a task as soon as they entered the room. The goal of this action was to increase potential instructional time in the classroom by reducing wasted minutes at the beginning of the class period. This presentation describes the details and methods used to take this action.

Jessica Leesburg

Mentor: Erik Larson

Petrographic Analysis of the Bush Bay Formation, Engadine Group, Hiawatha National Forest, Upper Peninsula, MI.

The mid-Silurian Engadine Group is poorly understood and comprised of three dolostone formations. The upper-most unit, the Bush Bay Formation (BBF), has a negligible dip and a maximum thickness of 20m. A stratigraphic section of the BBF was measured by walking a distance of ~1.2km while gaining ~15m of elevation along a shallow slope representing the paleo-lakeshore of glacial Lake Nipissing within the Pontchartrain Shores area, east of St. Ignace, MI. Twenty-one hand samples were collected from outcrops comprised of slope breaks, reef mounds, grike fields, and alvar. Hand sample analysis and standard petrographic thin section analysis were conducted on the samples, and findings indicated that the BBF is primarily a dolowackestone. With the hand sample and thin section data a detailed stratigraphic column and description of the BBF has been completed and the Engadine Group is closer to being understood.

Audriana Lindamood

Mentor: Scotty Thompson

Parent Involvement in Homework

This presentation covers the first three chapters of an action research plan conducted to investigate the effects of providing parents literature on ways they can help their child do homework by examining student achievement and homework completion rates.

Summer Little

Mentor: Aaron Bruewer

Using Literature to Promote Growth Mindset in the Classroom

The presentation will cover the definitions of the terms growth and fixed mindset. These two terms are used consistently in the modern day classroom. The presentation will then examine how students holding one mindset, or the other impacts their learning and success in the classroom. After discussing both of these points the presentation will then examine which mindset should be promoted in the classroom. To do this a review of literature will be presented which covers methods which have been used in the past. Some of these methods proving effective, and others proving ineffective. In conclusion, the researcher will present the gap in the research and a proposal for addressing this gap.

Marwen Moslah

Mentor: David Deacon

Computer Vision Application for Industrial Image Processing Test

A computer vision calibration application developed with the National Instruments environment via C++ language. This application can allow engineers in the company of my home country in which I had my senior internship to detect anomalies for the screens of modems that they produce. These anomalies covers backlight intensity of these screens, dead pixels, RGB color values and other image processing tests. As consequence, instead of having a manual testing for the screens, thanks to this application, the test process for these screen became automated, minimising the intervention of those engineers, and ensuring more efficiency and reliability by minimising the test time.

Abbey Perry

Mentor: Kimberly Inman

BMP4 Expression in the Embryonic Chick Eye Following Induced Gestational Diabetes

Human adults with diabetes pose a 60% higher risk for cataract development. Similarly, metabolic conditions in a mother's womb may induce congenital cataracts — a diagnosis with possible complications such as permanent visual impairment, amblyopia, and nystagmus. It is known that expression of bone morphogenetic protein 4 (BMP4) is needed for proper formation of the eye in *Gallus gallus domesticus*. The aim of our current research is to create a timeline of when and where BMP4 expression occurs in the developing chick eye. To investigate the effects of BMP4 signaling in early stages of eye development, we will implant BMP4 soaked beads in the chick. Future research will observe the effects of gestational diabetes on expression of BMP4, using a model system formed by treating the developmental environment with glucose solution. We hypothesize that altering the metabolic conditions will result in disruption of the BMP4 mechanism and induction of cataract formation.

Cole Schrock

Mentor: Aaron Bruewer

Can Student Art Make a Difference in their Environment at School?

Art is an important part of any culture, as it provides information about what that culture considered to be important and how they live, or lived. A school is like a miniature culture and the art that its students create show what that school is interested in and what it finds to be important. The question remains, do students have actually have a say on the culture in their school?

Tyler Sherwood

Mentor: Dan Chaffin

A Review of the Vegetative Anatomy of *Anredera Cordifolia* (Basellaceae)

Anredera cordifolia (Tenore) Steenis is a vine of vigorous growth habit native to South America. Anatomical detail of vegetative organs was studied using light microscopy. Cellular characteristics, tissue types and regions of all vegetative organs were described. Utilizing resin as an embedding medium for sectioning seems to allow better cellular resolution in organs.

Logan Shinkle

Mentor: Scotty Thompson

Monitoring Students' Learning Growth Over Time

The study that will be presented is how well students learning growth improves over time. The areas that will be focused on is Language Arts and Mathematics. The goal is to get the student to improve every time their learning growth is measured and the strategies used to help their learning growth.

Kristine Thompson

Mentor: Janet Snedegar

Do Thickeners Really Work?

Research and analysis of the following PICO question: In newborn infants with gastro-esophageal reflux, does thickening the formula versus not thickening the formula reduce the symptoms of reflux?

Bo Wampler

Mentor: Jennifer Napper

Developing General Biology Labs

The goal of my research was to find ways that general biology labs could be executed more proficiently; in a way that students would better comprehend the curriculum. By using just the basic materials held at SSU, I was able to conduct many of the experiments that the university typically spends thousands of dollars, for a significantly lower cost — and most importantly all while collecting some amazing data. This research will be used to develop multiple labs for Shawnee State students to use in the near future.

Emilee Hedrick

Mentor: Scotty Thompson

Decreasing Disruptions Using The Positive Reinforcement Strategy of Quiet Critters

Quiet critters have become a new strategy for positive reinforcement in classrooms. Quiet critters are little pom-pom balls with googly eyes. The quiet critters only come out when the students are being quiet. Study shows that implementing positive reinforcement strategies in classrooms can help to decrease disruptions. There will be two different types of disruptions; major and minor disruptions. The quiet critters will come out during math instruction and will sit on their desk while instruction is being completed. If a student becomes disruptive, then the quiet critter goes back into the jar. With implementing quiet critters, there will be a decrease in the amount of disruptions that occur.

Abby Bailey

Mentor: Scotty Thompson

The Positive and Negative Effects of Co-Teaching on Students' Learning

The purpose of this study is to decide whether collaborative team teaching effects the way a child learns. By doing this study, the principle researcher wishes to study the outcomes of students' learning in a classroom setting with collaborative teaching. Specifically, the researcher requests to see if having two teachers in the classroom work in partnership benefits the learning experiences of the students.

Garett Scowden

Mentor: Logan Minter

Integrating Sustainable Pest Management in the Waller Conservatory at Shawnee State University

This study pertains to investigating the implementation of a more sustainable, integrated pest management (IPM) plan in the Waller Conservatory at Shawnee State University. The conservatory has perennially faced infestations of mealy bugs, which survive by sucking nutrients from their host plant. Insect pests have been primarily combatted using chemical control techniques throughout the conservatory's history. As an attempt to reduce pest pressure, cultures of beneficial, biocontrol insects have been released into the greenhouse, along with very targeted and biorational use of pesticides, only when necessary. Released biocontrol agents to date include 100+ mealy bug destroyers (*Cryptolaemus montrouzieri*), ~1000 green lacewing larvae (*Chrysoperla* sp.), and 9000 lady beetles (*Hippodamia convergens*). To test this method, eight plants were monitored weekly, prior to and following release of biocontrols. Measurements and pictures of mealy bug cultures were collected weekly to determine the impact and effectiveness of the new IPM program for Waller Conservatory.

GROUP PRESENTERS

Moderators: Leila Lomashvili & Alberto Poxes

Josh Barney & Mika Garrett

Mentor: Wendi Fleeman

Nickel Diimine Complexes for Dye-Sensitized Solar Cells

In recent years, transition-metal dye molecules have been studied for their use as sensitizers in dye-sensitized solar cells (DSSC). Previous studies have utilized multiple transition metals such as ruthenium, osmium, and platinum and have reported respective solar cell efficiencies up to 11%. However, these metals can be expensive and require a complicated, synthetic path. Therefore, this study focuses on the use of nickel diimine complexes as sensitizers in DSSC because of their inexpensive, simpler synthetic path. Currently, the synthesis and efficiency of the nickel sensitizer dye molecules, Ni(3,3'-dcbpy)qdt, Ni(4,4'-dcbpy)qdt, and Ni(5,5'-dcbpy)qdt are under investigation where dcbpy = dicarboxy-2,2'-bipyridine (with different steric conformations on the nickel diimine ligands) and qdt = quinoxaline-2,3-dithiolate.

Berea Burke & Jonathan Putnam

Mentor: Eugene Burns

Effect of Foods on Bacterial Attachment in Crohn’s Disease

Thousands of people in the U.S. suffer daily from Crohn’s disease. Treatments mainly target the symptoms using anti-inflammatory medications, with no known cure and the cause still being unknown. This disease involves chronic inflammation of some or all of the digestive track and includes symptoms such as diarrhea, fever, abdominal pain, and reduced appetite, among other symptoms. Intestinal microbial agents play a key role in causing Crohn’s Disease as well as IBD, and this imbalance of microbiota is believed to exacerbate the inflammation. This research will investigate (1) The interaction and attachment mechanisms of 2 bacteria, *Serratia marcescens* and *Escherichia coli*, as well as 1 fungal species, *Candida tropicalis* to intestinal epithelial cells, (2) Compare bacterial and fungal species and interactions with typical food products to determine the effect on attachment including, Gluten, Lactose, and Capsaicin which may be a key determinate in Crohn’s disease.



Jessica Conley & McKenzie McDowell

Mentor: Aaron Bruewer

How to Increase Students’ Attitudes Towards Mathematics

This presentation focuses on ways in which teachers can increase students’ attitudes towards mathematics and decrease math anxiety. The researchers researched two methods and their impact on student attitudes, the use of group based co-teaching models, and increased use of technology in the classroom.



Amy Craig, Sarah Biehl, & MaryLouise Thompson

Mentor: Ryan Walker

Plantar Fasciitis

What treatment approach is more effective for cases of chronic plantar fasciitis: orthotics or kinesio-taping?



Cassie Edwards, Kelsey Carmack, & Jessica McCombs

Mentor: Ryan Walker

Lateral Epicondylitis

A review of treatment options and the effectiveness of each on lateral epicondylitis. Grip strength, pain, and ROM are measured to determine the effectiveness of each treatment performed on the patients.



Nathan Ewing, Jourdan Priddy, Catlin Shilling, & Timothy Meyer

Mentor: Ryan Walker

Subacromial Impingement

The effectiveness of proprioceptive neuromuscular facilitation and scapular stabilization exercises in collegiate pitchers in regard to pitch velocity.



Charles Howell, Jessica Ruggles, & Haley Ruggles

Mentor: Ryan Walker

Patello Femoral Pain Syndrome

Patellofemoral Pain Syndrome (PFPS) is a diagnosis for knee pain and is a complex condition that our group researched. The poster will present an overview of PFPS. The poster will also include our hypothetical research project and suggest possible findings if the research were conducted. Three research papers were developed in the process of creating this presentation. The primary focus will be the effect Physical Therapy can have on PFPS.



Levi Kiser, Amy Coriell, Andrew Cantwell, & Corey Tenney

Mentor: Ryan Walker

The Effects of Deep Tissue vs Soft Tissue Mobilization when Treating Carpal Tunnel Syndrome

Our presentation compares the theory of how soft tissue mobilization when pair with active stretching would yield higher benefits in terms of range of motion that when compared with soft tissue range of motion paired with active stretching and active stretching on its’ own; in a study group of factory working men with Carpal Tunnel Syndrome.



Allison Ratcliff, Kayla Satterfield, & Jordan Cauton

Mentor: Ryan Walker

Greater Trochanteric Bursitis (GTB)

This presentation describes GTB and shows, in our opinion, treatments that would help those with this condition. Our group put together an experiment that tested different treatment options for GTB and then predicted what we thought the outcomes of the experiment would be based off extensive research that we did.



Aaron Wamsley, Gabriel Howard, & Madison Scarberry

Mentor: Jennifer Napper

Detection of DNA Methylation in 5-Azacytidine treated Acute Myeloid Leukemia Cells

Cells naturally regulate gene expression through DNA methylation, which is carried out by DNA methyltransferases (DNMT). DNA methylation ultimately results in a reduction of target protein expression in cells. Abnormal gene expression due to DNA methylation has been described in many types of cancer. We wish to determine whether inhibition of DNA methylation has an effect on AML cell survival. 5-azacytidine, a chemical analog of the nucleoside cytidine, has been well documented to inhibit DNMTs. Our hypothesis that treating AML cells with 5-azacytidine will inhibit AML cell growth. Three AML cell lines, HL-60 and U937, and Kasumi 3 were treated with 5-azacytidine and kill curves were constructed. Appropriate concentrations of 5-azacytidine were determined from the kill curve data. After 48 hours of treatment, DNA from cells was isolated, and treated with sodium bisulfite. Bisulfite treatment will allow us to determine the extent of methylation in target genes using PCR and sequencing.



Provost's Dinner

6:15 – 8:30 p.m.

UNC, Sodexo Ballroom

By invitation only: Student presenters, faculty mentors, moderators, and honored guests.

New Frontiers in Social Science Research: Using “Heavy Data” to Re-Think How We Generate Knowledge

John Hitchcock Ph.D.

Associate Professor of Instructional Systems Technology
Director, Center for Evaluation and Education Policy
Indiana University, Bloomington



Dr. John Hitchcock is an associate professor of instructional systems technology within Indiana University’s School of Education. With extensive experience leading large research projects at the state, federal and international levels, he has expertise in design and analyses, program evaluation, and technical assistance. Dr. Hitchcock has served as a principal investigator (PI) on three large-scale experiments (randomized controlled trials) to test whether new ways of teaching work better than standard approaches. He is serving as a PI on a fourth experiment currently being conducted in Chicago. His work in research methodology has focused on establishing ways of combining and mixing different research traditions. A co-author of more than 40 scholarly publications (peer-reviewed journal articles, national reports, a book, and textbook chapters), Dr. Hitchcock has also presented research at conferences more than 100 times. He is a former associate editor of *School Psychology Review*, remains on that journal’s editorial board, and is a co-editor-in-chief of the *International Journal of Multiple Research Approaches*.

Seeking to offer a modest prediction of a research future from within his own field, Dr. Hitchcock will address the idea of dramatic change in social science research shifting from the idea of “big data” to “heavy data.” Considering smaller datasets like state-level datasets, U.S. Department of Education Datasets, Census Bureau information, Crime and Health data, and so on, it may be possible to begin to pull in some bigger data from our friends at Google. Putting aside some logistical issues, how far away are we from developing software packages that provide easy access to these datasets and visualization features that will allow us to understand communities, neighborhoods, and schools in new and deeper ways? In short, we would have a new frontier in how we engage in social science research that could be essential for solving any number of problems. With this background, Dr. Hitchcock will present some very fledgling steps he and his colleagues have thought about so far to achieve such a future. A discussion is expected, as he will invite ideas for how we might start to think very differently about using heavy data to re-think our engagement in social science research.



5A UNC 214
Moderator: Adam Miller

Marwen Moslah
Mentor: David Deacon

Computer Vision Calibration Application Designated for Industrial Image Processing Test

A computer vision calibration application developed with the National Instruments environment via C++ language. This application can allow engineers in the company of my home country in which I had my senior internship to detect anomalies for the screens of modems that they produce. These anomalies covers backlight intensity of these screens, dead pixels, RGB color values, and other image processing tests. As consequence, instead of having a manual testing for the screens, thanks to this application, the test process for these screen became automated, minimising the intervention of those engineers, and ensuring more efficiency and reliability by minimising the test time.

Corbin Stockham & Clifton Ross
Mentor: Adam Miller

3D Printing & Automation

This presentation will discuss the development of one of the first functioning 3D printed robot end-of-arm-tool systems as well as what the future may hold for this manufacturing process in regards to the automation industry.

5B UNC 215
Moderator: Margaret Lehman

Ibrahim Alhutaylah
Mentor: Gay Lynn Shipley

The Role of Parents in Increasing the Educational Attainment of Their Learning Disabled Children

The purpose of the study is to identify ways to get parents of disabled children to become more involved in their child's education.

Faisal Almuqati
Mentor: Gay Lynn Shipley

The Effectiveness of Communication Skills Among Students with Learning Disability in Improving their Scholarship in Saudi Arabia

This research aims to investigate the effectiveness of communication skills among students with learning disabilities in two of elementary schools in the city of Taif, Saudi Arabia on enhancing the academic performances from second through sixth grades.

5C LIB 244
Moderator: Virginia Pinson

Courtney Kirby, Cody Henderson, & Leslie Minge
Mentor: Virginia Pinson

Occupational Insight: A Closer Look at Practicum and Internship Experiences in Acute Healthcare Administration

Acute healthcare administration students describe and discuss their professional experiences and observations during Acute Care Practicum and Internships. Discussion includes observation of various leadership roles, student participation in departmental activities, and exploring the unique culture of healthcare organizations.

5D LIB 204
Moderator: Kim Inman

Caleb Marsh, Dustin Hines, & Jessie Stewart
Mentor: Kimberly Inman

Investigation of Cellular Mechanisms Underlying Diabetes-Associated Birth Defects

Upwards of 75% of congenital defects remain unidentified in causation. Of the known causative agents, diabetes is one of the most prominent instigators of birth defects. Our purpose is to explore the effects of an uncontrolled glucose environment on embryogenesis using *Gallus gallus domesticus* as our model organism. In our preliminary study, we developed a working model in which treatment targeted development during late gastrulation stages, resulting in disruption of proper

embryogenesis. We observed hindbrain malformation, neural tube deformity, and caudal regression with an incidence of approximately 35% compared to uninjected and saline-injected controls. These defects are consistent with disruption of proper formation of the neural tube. Our current studies will investigate the underlying mechanism of these defects to determine if apoptosis (programmed cell death) plays a role in the embryonic defects we have observed.

Katherine Spencer & Olivia Thoroughman

Mentor: Eugene Burns

Carriage of Group A *Streptococcus* Among SSU Students

Streptococcus pyogenes, the only member of Lancefield Group A, is an infectious bacterium that can cause severe invasive diseases, such as necrotizing fasciitis and the common strep throat. Some members of the population can transiently carry these bacteria and remain asymptomatic, but can still spread the disease to others. The purpose of this study is to determine the rate of carriage of Group A *Streptococcus* among Shawnee State University students which can be correlated with demographic information, such as age, gender, encounters with children, and race. Throat swabs collected from random student volunteers were plated on sheep's blood agar plates to isolate by hemolysis. β -hemolytic colonies from each sample were isolated. The isolated colonies were Gram and typed using a rapid latex agglutination method in order to confirm GAS colonies. Polymerase chain reactions were used to amplify specific emm genes present and determine the M type of the samples.

5E LIB 207

Moderator: Erik Larson

Jacob Ashton & Dakota Thornton

Mentor: Tim Hamilton

Searching for Exoplanets Utilizing the Transit Method

The universe holds countless marvels that merit investigation, from neighboring stars to the planets that orbit them. Our focus will be on exoplanets, that is, planets outside our solar system. However, exoplanets are extremely small in comparison to the stars they orbit, and they are hard to detect. We use the "transit method," which looks for the eclipse of a star when its planet passes in front of it. We gather data on a target star

through a DSLR camera attached to a mount that tracks the motion of the sky. After processing the data from the camera, we will be able to calculate a change in brightness of that target star and if there is an object orbiting it. Doing this will help map out the surrounding universe and give us a better understanding of our place within it.

Ronald Emmons

Mentor: Erik Larson

A New Laboratory Method for Measuring the Dissolution Rates of Carbonate Rocks

Observed denudation rates of carbonate rocks in the field do not always match the theoretical rates; this project attempts to reconcile these inconsistencies. A new method was developed to measure the dissolution rate of carbonates by submersing the carbonate rock sample in a beaker of H₂CO₃ saturated water (through the addition of CO₂), where conductivity was measured to record the release of ions from the dissolution process. Discrete water samples were also collected at regular intervals which were later analyzed for Ca²⁺ concentration through atomic emission spectroscopy, allowing for a calibration between conductivity and Ca²⁺ concentration to determine the true experimental dissolution rate. Experimental data from samples are still forthcoming; however, based on preliminary data, it does appear that the new experimental apparatus does work — the rocks are dissolving. In the future, this procedure will be applied to a host of other carbonate rocks to address real world problems.

Brittany Cordle

Mentor: Erik Larson

Petrographic Analysis of Geologic Formations in the Appalachian Basin: I-64, Lexington to Ashland, Kentucky

Eleven hand samples collected from outcrops between the cities of Lexington and Ashland, Ky, along I-64, were cut and polished into thin sections. Petrographic analysis was conducted on these thin sections to determine the petrology of the sedimentary rocks (e.g. sandstone and limestone) which make up the western part of the Appalachian Basin. The eleven samples collected are representative of six formations, which are (in ascending stratigraphic order): Clays Ferry, Ashlock, Bull Fork, Drowning Creek, Ohio Shale, and Princess Formations. The data obtained from these petrographic analyses will aid in the future study of these formations of the Appalachian Basin.

6A UNC 214

Moderator: Catherine Bailey

Amber Vaughn, Madison Woodard, Megan Castle, & Maddison Vanderpool

Mentor: Catherine Bailey

Evidence-Based Practice in Nursing: Skin Tears and Abrasions

Due to side effects of medications and the fragile nature of the skin of the elderly patient, skin tears and abrasions do occur in the acute care setting. The presenters will discuss their scholarly endeavor to locate, review, and summarize the evidence regarding nursing management of skin tears and abrasions in the acute care setting and compare their findings with contemporary practice.

Madison Thomas, Nicholas Adams, Jenna Liston, & Tashia Pruitt

Mentor: Catherine Bailey

Evidence-Based Practice in Nursing: Chlorhexidine Gluconate Baths

Prevention of infection is a priority in the hospital setting. Keeping patients free from infection during hospitalization improves patient outcomes and can save millions of dollars in infection related expenses. Implementation of Chlorhexidine Gluconate (CHG) bathing is an infection prevention measure used for patients with central venous access lines and patients scheduled for specific surgical procedures. The presenters will discuss their scholarly endeavor to locate, review, and summarize the evidence regarding the use of CHG bathing in the hospital setting and compare their findings with contemporary practice.

Megan Jones, Alexis Coriell, Adam Newman, & Sarah Fife

Mentor: Catherine Bailey

Evidence-Based Practice in Nursing: Intravenous Therapy

Evidence-based nursing care provides the patient with care that is based on current evidence, includes the perspective of the patient, and considers the clinical expertise of the nurse. Presenters will discuss their

scholarly endeavor to locate, review, and summarize the evidence regarding nursing management of intravenous (IV) therapy in the hospital setting and compare their findings with contemporary practice.

6B UNC 215

Moderator: Catherine Bailey

Alisha Shepherd, Blake Hildebrant, Herman Morgan, & Chandler Fowler

Mentor: Catherine Bailey

Evidence-Based Practice in Nursing: Prevention of Falls in the Acute Care Setting

Preventing the hospitalized patient from experiencing a fall is of critical importance. This presentation examines the best practice recommendations to prevent a patient fall occurrence while in the acute care setting. Presenters will discuss their scholarly endeavor to locate, review, and summarize the evidence regarding prevention of falls and compare their findings with contemporary practice.

Kalyn Ehrhart, Kara Crabtree, Sammantha Jenkins, & Amanda Hartley

Mentor: Catherine Bailey

Evidence-Based Recommendations for GI Intubation

Evidence-based nursing care provides the patient with care that is based on current evidence, includes the perspective of the patient, and considers the clinical expertise of the nurse. Presenters will discuss their scholarly endeavor to locate, review, and summarize the evidence regarding the nursing procedure of GI intubation and compare their findings with contemporary practice.

Andrew French & Matt Green

Mentor: Jason Witherell

Pressure Washer VR

Pressure Washer VR was the winning game idea pitched for the 2017 Student Game Design Contest at the Shawnee Conference. This presentation is geared toward showing off the progress that has been made toward the original idea since then and the direction that it is currently going. We will be showing off some of the unique mechanics and ideas behind the game as well as some actual game play.

Cory Smock

Mentor: Elizabeth Wood

Virtual Reality: The Next Frontier

No great innovations ever came from fear of failure. Virtual reality must be a higher priority as it has the power to change a multitude of industries worldwide in how they operate. Virtual reality provides a means of experiencing realistic scenarios in a safe and adjustable setting. As a result, virtual reality serves as the perfect method of exposure therapy for the phobias and PTSD. Virtual reality is a prime candidate for training simulations in dangerous fields of work due to the immersive qualities of the technology. Virtual reality setups may be expensive for the average consumer; however, the cost has steadily been decreasing over the years while the quality has continued to improve. The graphical quality and computing power to run virtual reality simulations efficiently exists and is available on the market. Virtual reality is the next frontier.

Alyssa Lambert

Mentor: Elizabeth Wood

Electroconvulsive Therapy: Inhumane Mental Health Treatment

A look into the research done on electroconvulsive therapy, an age old treatment for illness' such as schizophrenia, major depressive disorder, and bipolar

disorder, to prove why it is an inhumane treatment when modern medicine/therapies have more effective treatment options.

Whitney Berryman

Mentor: Sarah Boehle

Where Did All the Old People Go?

When most people hear the word “nursing home” they think of a place just for elderly who can no longer care for themselves at home and just a step down from the hospital. That it is a place that you go to when you are ready to die but this isn't the case. Even though the nursing home is still a place for the elderly to receive care, they are not the only age group who use it's services. In the last 15 years or so, nursing homes have turned into a place that offers not only long-term care but short-term rehabilitation services also. The elderly are not the only one's who use these services but younger and middle aged adults do also. In this presentation, we will discuss the reason's for this change and why not just old people are using nursing homes anymore.

Mackenzie Riley

Mentor: Elizabeth Wood

Occupational Therapy: A Necessity in Patient Care

Occupational therapy is a therapeutic service that many individuals can benefit from. Occupational therapists (OTs) can help individuals of all ages in a multitude of settings, including both physically and mentally. Because of the unique qualities, creativity, and versatility that OTs exemplify, they are a necessary part of therapy services. Using the skill of divergent thinking, OTs uniqueness is apparent in treating disabilities holistically in all different settings. By using creativity, OTs can tailor all interventions to give clients the best experience. Because occupation is not limited to only physical capabilities, versatile intervention is important for therapy clients. The knowledge of OTs role in not only therapy services, but also healthcare as a whole, gives the profession the distinction it should have in collaborative healthcare today. Understanding the broad range of qualities, individuals, and settings that occupational therapists can service affirms why OTs are important today.



Featured Speaker

11 a.m. UNC, Sodexo Ballroom

Translating Research into Practice

Jill Bradley-Levine Ph.D.

Assistant Professor of Educational Studies
Ball State University



Within each profession, research is carried out for a variety of reasons. Further, researchers utilize distinct methodologies that do not always align. Nevertheless, most researchers are likely to agree that they approach their work as both an occasion to learn something new, and as an opportunity to positively impact people. The translational research model offers a framework for helping us focus our research on the human impact of our work. Through its emphasis on engaging with the individuals who are most affected by the research, this model provides a practical approach to conducting research with human outcomes in mind. Dr. Bradley-Levine will share examples from her work to demonstrate translational research as a theoretical and applied approach.

Jill Bradley-Levine received her BA in English Education and MA in Secondary Education from Ball State University, and her PhD in Education Policy Studies from Indiana University. Her research interests are teacher education and leadership, and innovations in curriculum and instruction. She teaches curriculum and inquiry methodology courses, and serves as Program Director of the Master of Arts in Secondary Education and the Hoosier STEM Academy at Ball State. Jill is also principle investigator for the Stevens Initiative grant, which is providing Indiana and Iraqi students the opportunity to participate in a virtual exchange program. She is committed to preparing and developing high quality teachers and researchers across Indiana, the U.S. and abroad.

Awarding of Door Prizes

Noon

Note: The door prizes will be awarded immediately after the closing speaker in the UC, Sodexo Ballroom. The winning ticket must be presented at the time of the drawing to collect the prize.

Campus Picnic

Noon – 2 p.m.

Massie Hall Lawn

Open to **all** members of the SSU community.

Table of Presentations – Wednesday

Time & Session	A	B	C	D	E	F
<p>Noon – 12:50 p.m.</p> <p>Session 1</p> <p>M = Moderator</p>	<p>Emily Dunham, Kylie Berry, Staci Davis, Crystal Holtgrewe, Chimdiya Nosiri, Matt Penix, Cody Redman, Deborah Smith</p> <p>Addressing Health Literacy Needs to Promote Positive Patient Outcomes</p> <p>M = Adair Carroll MUC 214</p>	<p>Jacob Blair, Chase Meade, Noah Braden</p> <p>Respiratory Therapy Case Study</p> <p>Michelle Wampler, Lesleigh Sexton, Adam Pate</p> <p>Effects of Burn Trauma on the Respiratory System</p> <p>M = Amy France MUC 215</p>	<p>Diana Paola Piedra Moreno</p> <p>Conceptions Regarding Relationships Between Democracy and Mathematics Curriculum</p> <p>Katie McIntosh</p> <p>Understanding Student Perceptions of Belonging in the Middle School</p> <p>Madeline Girts</p> <p>Changing the Way Math Curriculum is Presented: An Action Research Project</p> <p>M = Jodi Dunham LIB 204</p>	<p>Samantha Budd</p> <p>Islam and Democracy and How Democracy is Compatible with Islam</p> <p>Ryan Dossier, David Jaeger</p> <p>The Ethics of Transhumanism</p> <p>Delinique Barber</p> <p>Are We Beyond Race?</p> <p>M = Karen Koehler LIB 207</p>	<p>Devin Jenkins</p> <p>Does Segmentation Promote Phonemic Awareness?</p> <p>Chelsea Bobst</p> <p>Effectiveness of Parental Involvement in the Classroom</p> <p>Kimmy Morgan</p> <p>The Effects of Parental Involvement on Academic Success</p> <p>M = Michele Moohr MAS 108</p>	
<p>1 – 1:50 p.m.</p> <p>Session 2</p> <p>M = Moderator</p>	<p>Raigan Pyles, Aleah Clark, Derrick Dillow, Tori Harr, Madison Osborne, Amy Lore, Kari Skeens, Stacy Wheeler, Carrie Wynn</p> <p>Addressing Health Literacy Needs to Promote Positive Patient Outcomes</p> <p>M = Adair Carroll MUC 214</p>	<p>Alexis Witter, Paige Bentley, Josh Wilfong</p> <p>Respiratory Therapy Case Studies</p> <p>M = Amy France MUC 215</p>	<p>Levi Little</p> <p>An Analysis of Cooperative Learning</p> <p>Jess Patrick, Brittany Stout</p> <p>Making Math Interesting</p> <p>Annie McFarland</p> <p>Collaborative Learning and Math Motivation in the Middle School Classroom</p> <p>M = Jodi Dunham LIB 108</p>	<p>Mallory Spencer</p> <p>Exponential and Logistic Models for Population Growth</p> <p>Derrick Mershon, Tyler Stidham</p> <p>Bordetella Biofilms and Their Interaction with Oral Microbiota</p> <p>Noah Wickerham, Martin Holsinger</p> <p>Bordetella Bronchiseptica and Bordetella Avium in Animals of Southern Ohio</p> <p>M = Leila Lomashvili LIB 207</p>	<p>Garrett Scowden</p> <p>Novel Propagation Methods of Humulus Lupulus in Southeastern Ohio</p> <p>Emily Meddock</p> <p>Trapped on Science: Digging Deep Into Learning</p> <p>Tiffany Knauff</p> <p>Inquiry in Kindergarten</p> <p>M = Michele Moohr MAS 108</p>	<p>Ashley Fox</p> <p>Effects of Positive Teacher Student Relationship on Learned Helplessness</p> <p>LeAnn Hackworth</p> <p>The Effects of Teacher Student Rapport on Classroom Behavior and Learning</p> <p>Bobbi Jo Bricker</p> <p>How Do individualized Education Plan (IEPs) Affect Students' Self-Esteem, Confidence, and Motivation to Learn?</p> <p>M = Erik Larson MAS 109</p>
<p>2 – 2:50 p.m.</p> <p>Session 3</p> <p>M = Moderator</p>	<p>Brooke Ballis</p> <p>Microwave Assisted Synthesis of Benzimidazoles Using Aromatic Aldehydes</p> <p>Brooke Ballis, Michaela Garner</p> <p>Sonogashira Coupling on Aryl Halide Compounds</p> <p>M = Rhoni Maxwell-Rader MUC 214</p>	<p>Marcena Sanchez, Kennedy Bee</p> <p>Respiratory Therapy Case Study</p> <p>M = Amy France MUC 215</p>	<p>Darbie Jenkins</p> <p>Increasing Oral Segmenting in Phonemic Awareness through Active Participation Intervention</p> <p>Erin Brammer</p> <p>Increasing Reading Levels with Various Forms of Intervention</p> <p>Monica Colley</p> <p>Differentiated Instruction in Elementary Response to Intervention Groups</p> <p>M = Kim Cassidy TED 124</p>	<p>Mallory Messer</p> <p>Pedagogical Approaches and Motivation</p> <p>Felicia Jennings</p> <p>Does Project Based Learning Affect Student Focus?</p> <p>Chelsea Rice</p> <p>Does Confidence Affect Motivation?</p> <p>M = Kejing Liu TED 126</p>	<p>Kaylie Ruckel</p> <p>Sight Word Intervention</p> <p>Bridgette Scaggs</p> <p>Word Recognition Action Research</p> <p>Abdulrazzaq Alanazi</p> <p>Motivational Strategies in Language Instruction</p> <p>M = Cheryl Irish MAS 211</p>	
<p>3 – 3:50 p.m.</p> <p>Session 4</p> <p>M = Moderator</p>	<p>Garett Blair</p> <p>The Effect of Classroom Discussion on Student Achievement</p> <p>Tyler Edler, Alex Hatfield, Cori Conley</p> <p>Improving the Modern Classroom</p> <p>Dakota Sparks</p> <p>Student Engagement</p> <p>M = Linda Hunt MUC 214</p>	<p>Emily Fulks, Cody Charles</p> <p>Respiratory Therapy Case Study</p> <p>M = Amy France MUC 215</p>	<p>Veronica Hayslip</p> <p>Improving Student Handwriting in the Classroom</p> <p>Kourtney Arnold</p> <p>Effects of Music and Movement on Classroom Behavior</p> <p>Hannah Price</p> <p>The Effects of Integrated Movement and Physical Activity on Students' Comprehension and Behavior</p> <p>M = Kim Cassidy TED 124</p>	<p>Lauren Rhoads</p> <p>Behaviors of the Classroom</p> <p>Sara Campbell</p> <p>Improving Emotional Intelligence in Kindergarten Students</p> <p>Maria Allison</p> <p>Discipline and Management Strategies in The Classroom</p> <p>M = Kejing Liu TED 126</p>	<p>Hayley Venturino</p> <p>Benefits of Journaling in an ECE Classroom</p> <p>Hadya Schmidt</p> <p>A Study on Promoting Conversation, Speaking, and Listening Skills in a Controlled Setting: Using Guidelines to Build Meaningful Classroom Discussions</p> <p>Mykalley Detty</p> <p>Does Technology Integration Have a Positive Impact on Students' Attitudes Towards Learning?</p> <p>M = Erik Larson LIB 204</p>	<p>Allison Higgins</p> <p>The Effects of Mimicry on Self Efficacy</p> <p>Melissa Ashton, Adrienne Carver</p> <p>Classroom Research Based Best Practices in a 9th Grade English Language Arts Classroom</p> <p>Bailey Horsely</p> <p>The Jaws of Justice: The Dog Behind the Teeth</p> <p>M = Dan Chaffin LIB 108</p>
<p>4 – 5 p.m.</p> <p>UNC Lobby</p> <p>Poster Session</p>	<p>All poster participants, both single and group, must be present.</p> <p>Poster clean up begins at 5:30 p.m.</p>			<p>Open to the public</p>		

Table of Presentations – Wednesday continued

4 – 6 p.m. LIB 204 Trustees' Award Moderator = Mistie Spicer	Autumn Hodge Emotional Intelligence and Auditory Stimuli	Sara Benner, Lana Percell Brain Responses of Women to Erotic Imagery	Savanna Nelson, Ashlyn Cassidy, Alannah Bihl Lifelab	Chelsi Wilson, Allison Gineman, Alexis Overton, Christopher Andrew Adams A Systematic Program Evaluation of an Innovative Community Safety Initiative: The Senior Home Information Program	Ronald Emmons, Dylan Carpenter Microwave-Assisted Synthesis of Polybenzimidazoles for Use as Analytical Sensors
4 – 6 p.m. LIB 207 Humanities Award Moderator = Janet Feight	Anna DeHart Marrying the Church: How Maria Luisa Bemberg Fought Marianismo Through Film	Brent Rowland Implications of Philosophical Perspectives for Moral Reasoning	Kaleb Burchett Williams Manufacturing Company: Portsmouth, Ohio's Final Shoe Factory		
6:15 – 7:20 p.m. UNC, Sodexo Ballroom	Provost's Dinner RSVP Only: Participants, Faculty Mentors, Session Moderators, Administration, and Invited Guests				
7:30 p.m. UNC, Sodexo Ballroom	Keynote Dinner Speaker Dr. John Hitchcock New Frontiers in Social Science Research: Using "Heavy Data" to Re-Think How We Generate Knowledge Open to the public				

Table of Presentations – Thursday

Time & Session	A	B	C	D	E
9 – 9:50 a.m. Session 5 M = Moderator	Marwen Moslah Computer Vision Calibration Application Designated for Industrial Image Processing Test Corbin Stockham, Clifton Ross 3D Printing and Automation M = Adam Miller MUC 214	Ibrahim Alhutaylah The Role of Parents in Increasing the Educational Attainment of their Learning Disabled Children Faisal Almuqati The Effectiveness of Communication Skills Among Students with Learning Disability in Improving their Scholarship in Saudi Arabia M = Margaret Lehman Morris UC 215	Courtney Kirby, Cody Henderson, Leslie Minge Occupational Insight: A Closer Look at Practicum and Internship Experiences in Acute Healthcare Administration M = Virginia Pinson LIB 244	Caleb Marsh, Dustin Hines, Jessie Stewart Investigation of Cellular Mechanisms Underlying Diabetes Associated Birth Defects Katherine Spencer, Olivia Thoroughman Carriage of Group A Streptococcus Among SSU Students M = Kim Inman LIB 204	Jacob Ashton, Dakota Thornton Searching for Exoplanets Utilizing the Transit Method Ronald Emmons A New Laboratory Method for Measuring the Dissolution Rates of Carbonate Rocks Brittany Cordle Petrographic Analysis of Geologic Formations in the Appalachian Basin: I-64, Lexington to Ashland, Kentucky M = Erik Larson LIB 207
10 – 10:50 a.m. Session 6 M = Moderator	Amber Vaughn Madison Woodard, Megan Castle, Maddison Vanderpool Evidence Based Practice in Nursing: Skin Tears and Abrasions Madison Thomas, Nicholas Adams, Jenna Liston, Tashia Pruitt Evidence Based Practice in Nursing: Chlorhexidine Gluconate Baths Megan Jones, Alexis Coriell, Adam Newman, Sarah Fife Evidence Based Practice in Nursing: Intravenous Therapy M = Catherine Bailey MUC 214	Alisha Shepherd, Blake Hildebrandt, Herman Morgan, Chandler Fowler Evidence Based Practice in Nursing: Prevention of Falls in the Acute Care Setting Kalyn Ehrhart, Kara Crabtree, Sammantha Jenkins, Amanda Hartley Evidence Based Recommendations for GI Intubation M = Catherine Bailey MUC 214	Andrew French, Matt Green Pressure Washer Virtual Reality Cory Smock Virtual Reality: The Next Frontier M = Marc Scott LIB 204	Alyssa Lambert Electroconvulsive Therapy: Inhumane Mental Health Treatment Whitney Berryman Where Did All the Old People Go? Mackenzie Riley Occupational Therapy: A Necessity in Patient Care M = Margaret Lehman LIB 207	
11 – 11:50 a.m. Morris University Center, Sodexo Ballroom	Featured Speaker Dr. Jill Bradley-Levine Translating Research into Practice Open to the public Drawing for door prizes begins immediately after the speaker in the Sodexo Ballroom. Must be present to win!!!				
Noon – 2 p.m. Massie Hall Lawn (rain location: MUC, Sodexo Ballroom)	Campus Picnic Open to students, faculty, & staff				