2017 SPRING RESEARCH CONFERENCE

Kingsgate Marriot
Saturday, April 1\textsuperscript{st}, 2017
8:00 a.m. - 3:00 p.m.

Jointly Sponsored by:

University of Cincinnati
University of Kentucky
University of Louisville
Welcome to the 2017 Spring Research Conference!

This annual conference is jointly sponsored by the University of Cincinnati, the University of Kentucky, and the University of Louisville. The University of Cincinnati’s College of Education, Criminal Justice, and Human Services is pleased to be this year’s host.

Today is devoted to providing students with an opportunity to present completed research and works in progress in a friendly but formal setting. Faculty, colleagues, and fellow presenters are encouraged to provide constructive feedback to all those presenting their projects.

We hope you enjoy your day!

If you have any questions, comments, or concerns please contact the 2017 SRC coordinator, Greg Hollon. He will be available throughout the conference today to assist you.

We would like to extend a special “thank you” to today’s speakers and facilitators, graduate student organizations, staff members, and our university liaisons. Your help and support is truly appreciated!

We would like to acknowledge the continued support of:

- Mary John O’Hair, Dean and Professor, College of Education, University of Kentucky
- Ann E. Larson, Dean and Professor, College of Education and Human Development, University of Louisville
- Lawrence J. Johnson, Dean and Professor, College of Education, Criminal Justice, and Human Services, University of Cincinnati

PLENARY SPEAKER
Dr. James Mack, Associate Dean of the Graduate School, University of Cincinnati

FACILITATORS
Dr. Michael Odio, University of Cincinnati
Dr. Janet Zydney, University of Cincinnati
Dr. Helen Meyer, University of Cincinnati
Dr. Cheri Williams, University of Cincinnati
Dr. Holly Johnson, University of Cincinnati
Dr. Vicki Plano Clark, University of Cincinnati
Dr. Anna DeJarnette, University of Cincinnati
Dr. Regina Sapona, University of Cincinnati
Dr. Jacinda Dariotis, University of Cincinnati

UNIVERSITY LIAISONS
Dr. Holly Johnson, University of Cincinnati
Dr. Robert Shapiro, University of Kentucky
Dr. Tim Landrum, University of Louisville

COLLEGE OF EDUCATION, CRIMINAL JUSTICE, AND HUMAN SERVICES GRADUATE STUDENT ASSOCIATION (CECH-GSA)

COLLEGE OF EDUCATION, CRIMINAL JUSTICE, AND HUMAN SERVICES RESEARCH AND DEVELOPMENT PROFESSIONAL PRACTICE BOARD

OFFICE OF THE DEAN (CECH)
Greg Hollon, University of Cincinnati
Gabrielle Miller, University of Cincinnati
Julie Smith, University of Cincinnati
# Conference Schedule

<table>
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<tr>
<th>Time</th>
<th>Session</th>
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| 8:00 – 9:00am | Registration & Continental Breakfast | Salon C – Second Floor | Check-in and receive registration materials at front of Salon C at top of main staircase  
Breakfast in Salon C – 2nd Floor |
| 9:00 – 10:00am | Welcome Session                | Salon C – Second Floor | Welcome and comments – Lawrence J. Johnson, Dean & Professor, CECH  
Plenary speaker – James Mack, Associate Dean of the Graduate School, University of Cincinnati |
| 10:15 – 11:25am | Paper Session I               | Mt. Adams   | Health Promotion 1  
Facilitator: Michael Odio  
5 presenters |
|               | Mt. Storm                     | Education       | Plenary speaker – James Mack, Associate Dean of the Graduate School, University of Cincinnati  
Facilitator: Janet Zydney  
5 presenters |
|               | Mt. Washington                | Criminal/Social Justice/STEM  
Facilitator: Helen Meyer  
5 presenters |
| 11:40 – 12:40pm | Paper Session II             | Mt. Adams   | Educational Psychology  
Facilitator: Regina Sapona  
4 presenters |
|               | Mt. Storm                     | Teacher Education  
Facilitator: Holly Johnson  
4 presenters |
|               | Mt. Washington                | ESL/International Studies  
Facilitator: Vicki Plano Clark  
4 presenters |
| 12:40 – 1:30pm | Lunch & Discussion           | Salon C – 2nd Floor |  |
| 1:45 – 3:00pm | Paper Session III            | Mt. Adams   | Health Promotion 2  
Facilitator: Anna DeJarnette  
5 presenters |
|               | Mt. Storm                     | Higher Education  
Facilitator: Cheri Williams  
5 presenters |
|               | Mt. Washington                | Research Methods  
Facilitator: Jacinda Dariotis  
5 presenters |

2017 Spring Research Conference  
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The University of Kentucky  
The University of Louisville
James Mack, Associate Dean of the Graduate School, is responsible for developing strategic initiatives around recruitment, admissions, policies, and student awards. He provides leadership for graduate student professional development and career advancement, serves as Graduate School liaison for a variety of university-wide committees, University Registrar, Office of Student Affairs & Services, and the International Student Services Office. As an executive team member of the University of Cincinnati Black Faculty Association he develops strategies to increase the recruitment, retention and success of Black faculty. As the Chair of the Advocacy and Accountability Council of UCLEAF, he helps the academic leadership to ensure that the broader goals of UC, particularly those surrounding diversity, inclusion, and faculty success, are aligned at the college and departmental level.

Mack is also Professor of Chemistry earning a doctorate degree from the University of New Hampshire and serving as a Postdoctoral fellow at Boston College. He has research interests in the development of environmentally benign organic reactions and the synthesis of novel organic materials. He has earned over $1 million dollars in research support, published numerous articles, and was named a Lowenstein Scholar. His research has been featured on NPR, in the New York Times, Forbes magazine, Chemical and Engineering News and Chemistry and Industry magazine. He is a proud and dedicated mentor, being awarded the Carl Mills award for outstanding faculty & student relations.
Suicide is a prevalent health issue for youth, making context critical for the development of effective intervention and prevention strategies. Although youth perceptions regarding suicide are relatively well studied, few studies utilize a YPAR approach to generate participant-driven data that is relevant to youth. This study examines youth perceptions on strategies for suicide prevention through a community-academic partnership with the Youth Council for Suicide Prevention. The council co-designed and co-facilitated a group level assessment at a regional high school conference to generate participatory data about suicide prevention. The responses were co-analyzed and used to develop presentations, future creating workshops, and programs at several Cincinnati schools. This study contributes to the literature on adolescent suicide and YPAR while also informing outreach activities that directly affect YCSP and their peers.

Developing Youth Capacity to Transform Strategies for Suicide Prevention: Findings from a Youth-Academic Research Partnership

Robin Lindquist-Grantz
University of Cincinnati

After years of decline, there has been a steady increase in the percentage of youth who report seriously considering suicide or making a suicide plan, and suicide has moved from the third to the second leading cause of death for youth ages 10 to 24. Despite increases in public funding and strategies to prevent suicide in recent years, the effectiveness of existing strategies varies. Although youth are among the primary targets of suicide prevention strategies, they have largely been excluded from prevention efforts except as passive participants in programs and research studies. In the current study, Youth Participatory Action Research (YPAR) was used to engage youth as co-researchers and build their potential to be intentional agents of change for issues that directly affect them and their peers. Using an integrated social ecological and positive youth development theoretical framework, YPAR was not only implemented as an approach to conducting adolescent suicide research, but also as a community-based suicide prevention strategy. In this presentation, participants will learn about youth experiences participating YPAR for suicide prevention and their perceived capacity for conducting suicide prevention research. Participants will also learn about key processes within YPAR that foster individual and group development, and a positive perception of the ability for young people to work collectively to address adolescent suicide amongst themselves and with their peer group.

Association of Malaria Control Methods and Healthcare Access among Pregnant Women in the Democratic Republic of the Congo

Angelica Hardee Ph.D., Ashley L. Merianos Ph.D., Rebecca A. Vidourek Ph.D., and Keith A. King Ph.D.
University of Cincinnati

Malaria is a major public health problem and life-threatening disease. In the Democratic Republic of the Congo (DRC), roughly 400 children die every day and almost half of these deaths are attributable to malaria. The purpose of this study was to examine whether malaria control methods differed based on perceived problems preventing pregnant women from seeking medical advice or treatment, receipt of prenatal care and source of prenatal care, and sociodemographic characteristics. A secondary data analysis of pregnant women (n = 2,404) who completed the Demographic and Health Survey in the DRC was conducted. Results indicated that use malaria control methods significantly differed among pregnant women based on educational attainment, ethnicity, and wealth index. Pregnant women who slept under a bed net were more likely to receive prenatal care (p = .002), including 1.95 times more likely (p = .002) to receive care from a doctor, than pregnant women who did not sleep under a mosquito net. Pregnant women who took SP/fansidar for malaria during pregnancy were more likely to perceive that distance to a health facility (p < .001) and not wanting to go alone (p = .009) were not big problems for getting medical help for themselves. Pregnant women who took chloroquine for malaria while pregnant were 3.6 times more likely (p = .04) to receive care from a doctor. Awareness of malarial control methods is critical in shaping the necessary interventions and policies toward the control of such diseases and addressing this global health disparity.

High-Intensity Weight-Supported Kinetic-Chain Resistance Training for Improving Health-Related Fitness in College Students: A Pilot Study

Matthew McCabe
University of Cincinnati

High-intensity low-volume exercise training (HILVET) has been shown to be a time-efficient method for improving health-related fitness. However, the effects of HILVET while incorporating a weight-supported kinetic-chain resistance training (WSKCRT) modality are unknown. The purpose of this pilot study was to evaluate the impact of a novel high-intensity low-volume WSKCRT program on health-related fitness. Outcome measures were maximal oxygen consumption (VO2 max), muscular strength, muscular endurance, body fat percentage (BF%), and lower body flexibility. Six recreationally active undergraduate college students completed high-intensity low-volume WSKCRT three days per week for six weeks. Training consisted of performing 4-9 intervals of WSKCRT, for 30 seconds at 90% of heart rate reserve (HRR) followed by 60 seconds of treadmill exercise at 40% of HRR. Significant improvements in muscular strength (504.9 ± 223.0 to 596.2 ± 206.1 kg; p = 0.0001) and BF% (23.1 ± 8.7 to 20.3 ± 7.6 %; p = 0.004) were observed from baseline. Changes in VO2 max (37.3 ± 5.1 to 41.4 ± 6.9 ml/kg/min; p = 0.045), muscular endurance score (96.8 ± 3.8 to 132.9 ± 66.7; p = 0.027), and lower body flexibility (10.92 ± 7.04 to 10.55 ± 5.37 cm; p = 0.760) failed to reach statistical significance. These results indicate the potential efficacy of HILVET, using a WSKCRT modality, for college students seeking to improve their health-related fitness. Future research is warranted to determine if HILVET, utilizing a novel WSKCRT modality, is comparable to nationally recommended exercise guidelines.

The Effect Friend and Family Factors have on Electronic Cigarette use among Hispanic Adolescents

Kelsi Wood
University of Cincinnati

Background: Tobacco use among adolescents has been a consistent problem nationwide. More recently, electronic cigarette (e-cigarette) use has rapidly increased and is prevalent among Hispanic adolescents. Examining social factors associated with e-cigarette use may provide information for prevention programs. The purpose of the study was to examine the influence friend and family factors have on lifetime and current e-cigarette use (past 30 days) among Hispanic students. Methods: A secondary analysis of the 2014 National Youth
This portion of the project, data surrounding the experiences (workshops, peer groups, courses, etc.) at the university level. A plan to inform program development (i.e. mentorship programs, courses, etc.) at the University of Cincinnati (UC). Phase 2 will integrate data from Phase 1 in order to explore the experiences of undergraduate (UG) women in STEM at UC was gathered using a Photovoice method.

**Exposure to Childhood Sexual Abuse and the Development of Self-control**

Shahin Tasharrofi  
University of Cincinnati  
Prior studies have revealed that low self-control is one of the strongest predictors of antisocial behavior. As a result, scholars interested in understanding human behavior have attempted to identify the sources of low self-control. Empirical evidence suggests that self-control is shaped during childhood and that parenting, genetics, school and neighborhood context, and peer association, could contribute to the development of self-control. Recent evidence suggests young adults who were exposed to childhood sexual abuse (CSA) presented with, on average, lower levels of self-control compared to young adults who had not experienced CSA. Little is known, however, about the potential mediating mechanisms that explain the relationship between CSA and low self-control. This study explored a range of developmental factors that may mediate the relationship between CSA and the emergence of self-control in adolescence and adulthood.

**Examining Barriers to Prison Visitation**

Batya Rubenstein and Dr. Josh C. Cochran  
University of Cincinnati  
The Bureau of Justice Statistics reports that more than half of state prison inmates are parents of minor children. At the same time, less than half of all incarcerated parents report receiving visits from their children while incarcerated. Theory and research suggest, however, that visitation may be beneficial for inmates and their family members, especially children, but inmates’ families face a range of pragmatic barriers to visitation. In particular, prior research suggests that economic disadvantage creates or exacerbates the challenges individuals face visiting someone in prison. This study seeks to contribute to research efforts to understand prison visitation and the factors that influence it by examining the extent to which disadvantage influences the likelihood that children visit their incarcerated parents.

**POWER in STEM: Using Photovoice in a Participatory Research Opportunity for Women in STEM**

Batsheva Guy  
University of Cincinnati  
This project is part of the first phase of a two-phase participatory action research project, POWER in STEM (Participatory Research Opportunity for Women in STEM). The purpose of Phase 1 is to explore the experiences of undergraduate (UG) women conducting and/or actively seeking STEM (Science, Technology, Engineering, and Mathematics) research at the University of Cincinnati (UC). Phase 2 will integrate data from Phase 1 in order to inform program development (i.e. mentorship programs, workshops, peer groups, courses, etc.) at the university level. A core research group of undergraduate women STEM researchers participate fully in the data collection and research process. For this portion of the project, data surrounding the experiences of UG women in STEM at UC was gathered using a Photovoice method.

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**Youth Participatory Action Research: Empowering Underrepresented Minority Female Adolescents Using Arts Based Informed Research**

Alicia Boards and Crystal Whetstone  
University of Cincinnati  
This study seeks to examine the perceptions of 13 urban and immigrant female adolescents (grades 6th-8th) through a youth participatory action research (YPAR) approach using collage as an arts-based research inquiry for discovery of voice. Collage is a visual approach within qualitative research that allows participants to formulate ideas, better understand phenomena, work through emergent concepts, and represent ideas to others (Butler-Kisber & Poldma, 2010). This research design allows better understanding of youth and their needs while also empowering them to develop self-determination, leadership skills, and agency to create social change in their communities. This project seeks to not only explore these youth’s voice, strength, and resilience but also develop deeper understanding for future collaborative projects. YPAR lends itself to the improvement of schools, communities, and agencies while also developing personal and academic benefits to the youth who participate that can lead to positive social change (Ozer & Douglas, 2013).

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parents. Implications for theory, research, and policy are discussed.

The use of participatory asset mapping to improve community development: The case of educational leaders at John P. Parker Elementary
Rhemecka Graham
University of Cincinnati

John P. Parker Elementary (Parker) is a prekindergarten through sixth grade Cincinnati Public School located in the neighborhood of Madisonville. Parker is uniquely positioned atop a hill on the corner of Redbank Expressway and Madison Road—a major intersection branching from Cincinnati’s Interstate 71. The school is comprised of 348 students of which over 82% are African American children, 9% are Caucasian, 5% multiracial, 2% Hispanic, and <2% Asian or Pacific Islander. While Parker is majority African American, the Madisonville population reflects a more diverse racial makeup. According to the Statistical Atlas, the city is 51.9% African American, 42.8% Caucasian, 2.4% Asian, 1.6% mixed race, and 1.2% Hispanic/Latino. Madisonville is currently undergoing economic redevelopment. While the diversity of Madisonville adds to its distinctiveness, as a neighborhood changes, so does the makeup of its public schools. Understanding this inspired Pamela Knox, Parker’s resource coordinator, to use asset mapping to bring diverse members of Madisonville together. Parker is ideal candidate to examine how educational leaders can leverage their genuine relationships with diverse youth and families to prevent displacement, encourage dialogue, and break false perceptions. The research question proposed in the present paper is: how can educational leaders at John P. Parker Elementary use participatory asset mapping to improve community development?

PAPER SESSION I – Criminal/Social Justice/STEM
10:15 – 11:15am | Mt. Washington Room

Facilitator: Helen Meyer
Perceived Teacher Collective Efficacy Measure (PCTEM) Pilot
Amber Hunter
University of Cincinnati

Presentation of pilot study for “Perceived Teacher Collective Efficacy Measure (PCTEM)”. This new measure intends to be a comprehensive measure of both self-efficacy and collective efficacy perceptions of teachers.

Validating Challenges Teachers Face Survey Items Using a Rasch Approach
Audrey Conway
University of Kentucky

Teachers face a variety of challenges to student learning in the classroom, including: the diverse needs of students, administration, access and physical facilities, and a lack of guidance (Goodwin, 2012). Often administrators are aware of issues, but are less aware of specific areas to focus efforts and support. Studies have shown that challenges faced often vary between novice and veteran teachers, with novice teachers more likely to view student behavior as a problem than veteran teachers (Melnick & Meister, 2008). While there is some research on the challenges faced by private and charter school teachers (Malloy & Wohlheter, 2003; Roehrig & Pressley, 2005), virtually no research has been found that assesses the degree to which the same survey items are comparable between teachers of different sectors simultaneously. For this pilot study, an Andrich-Rasch rating scale model will be applied to assess the degree to which teachers endorse common challenges faced in the classroom and school environment. A random stratified sample (n=75) of Indiana PreK-12 teachers will be used to begin validation on a 23-item measure included as part of a larger survey on teaching beliefs and habits. Analysis is ongoing.

Parent Engagement and After School Programming for Middle and High School Students
Fran Larkin
University of Cincinnati

The University of Cincinnati has pulled together a number of campus and community partners to provide after school programming through the 21st Century Community Learning Center Grant program. While parent and family engagement is a challenge for many schools, this research considers how after school programming can help provide a critical link between parents, families, and the schools their children attend.

Brain Imaging, Science Cognition, and Conceptual Change: A Literature Review
Ashley Vaughn and Dr. Marcus L. Johnson
University of Cincinnati

This paper offers a review of the major literature about brain imaging, science cognition, and conceptual change. It argues that there is a scarcity of research using brain imaging techniques, such as fMRI, ERP, and EEG, to examine how scientific concepts are conceptualized and how misconceptions are overcome. Given that educational neuroscience is still an emerging discipline, we argue that it is essential for science educators and brain imaging researchers work together to develop a better understanding of science cognition.

The Role of the Planetarium in Students’ Attitude, Learning, and Thinking about Astronomical Concepts
William Thornburgh
University of Louisville

The purpose of this study was to examine the role of the planetarium on students while learning astronomy. The research questions that guided this study dealt with changes in students’ attitudes towards astronomy, whether students learned and retained more knowledge from planetarium-enriched instruction, and how the planetarium helped students think about astronomical concepts. The framework used for this study was the Contextual Model of Learning (CML) (Falk & Dierking, 1992; 2000). The CML includes three overlapping contexts that contribute to the overall learning experience for students in science museums (and other informal science venues) - the personal, physical, and sociocultural contexts. Results of the study indicated that students were positively influenced in all aspects – attitude, learning, retention, and thinking. The immersive environment and unique capabilities of a digital planetarium helped students learn and make connections between formal and informal science. This study has important implications for planetariums, researchers, and schools.
that the sources collectively explained between 33% and 46% and with the self-efficacy variables. Regression analysis revealed sources of self-efficacy were strongly correlated with each other analyzed from fourth through twelfth grade students (N=954). All to examine the sources of science self-efficacy for students from 2009; Roscigno & Crowley, 2001). The purpose of this study was counterparts and may develop adverse self-beliefs (Farmer et al., 2009). Students' exposure to these sources also varies according to the context in which they live and their access to academic and social resources (Ahn et al., 2016). In rural areas, students often exhibit lower academic achievement than their non-rural counterparts and may develop adverse self-beliefs (Farmer et al., 2009; Roscigno & Crowley, 2001). The purpose of this study was to examine the sources of science self-efficacy for students from a high-poverty area in rural Appalachia. Data were collected and analyzed from fourth through twelfth grade students (N=954). All sources of self-efficacy were strongly correlated with each other and with the self-efficacy variables. Regression analysis revealed that the sources collectively explained between 33% and 46% of the variance in students' self-efficacy. Although vicarious experience was unrelated to self-efficacy, all four sources were related to self-efficacy for self-regulation. Mastery experience and negative physiological states were the strongest predictors of self-efficacy. Keywords: Self-efficacy, science, sources of self-efficacy, rural, Appalachia.

Stereotype Awareness and the Appalachian Student
Chelsea G Adams, Randi C. Gray, and Dr. Ellen L. Usher
University of Kentucky

Stigma consciousness refers to the extent to which people believe that their stereotyped status pervades their interactions with members of the out-group (Pinel, 2004. p. 39), and has largely been studied with a focus on race and gender. Although most research on Appalachian stereotypes focuses on dialect and mental health, little research has examined Appalachian adolescents' perceptions of stereotypes about Appalachia (Daniels 2014; Otto, 2002). The purpose of this study was to develop a better understanding of how students become aware of stereotypes and how stereotypes can affect Appalachian youth. Twelve students in Grades 6-12 from a school district in rural Appalachia participated in one-on-one interviews that were designed to answer three questions: What does it mean to be a student from Appalachia? How do Appalachian students believe being from Appalachia affects their lives? How do adolescents become aware of stereotypes about people in Appalachia? A grounded theory approach was used to investigate the data. Eight of the participants self-identified as Appalachian, but for distinct reasons (e.g., “being outdoorsy” and living in the area). Students characterized Appalachia for its strong sense of community, accessibility to nature, and lack of opportunities. They believed their schools afford them more one-on-one learning experiences than would a larger city school. All students readily identified negative Appalachian stereotypes, but were quick to defend the integrity of their culture and community.

Sources of Science Self-Efficacy in Appalachian Students: A Validation Study
Calah J. Ford and Dr. Ellen L. Usher
University of Kentucky

Students who believe they are capable of carrying out their academic work successfully (i.e., those with high self-efficacy) tend to succeed and persist in school longer than do those who doubt their capabilities (Usher, 2015). According to social cognitive theory, students form this sense of efficacy by interpreting information from four sources: enactive mastery experiences, vicarious experiences, verbal persuasions, and physiological and affective states (Bandura, 1997). Although these sources have been shown to influence middle school students' mathematics self-efficacy, their role in science and other grades is less clear (Britner & Pajares, 2006; Usher & Pajares, 2009). Students' exposure to these sources also varies according to the context in which they live and their access to academic and social resources (Ahn et al., 2016). In rural areas, students often exhibit lower academic achievement than their non-rural counterparts and may develop adverse self-beliefs (Farmer et al., 2009; Roscigno & Crowley, 2001). The purpose of this study was to examine the sources of science self-efficacy for students from a high-poverty area in rural Appalachia. Data were collected and analyzed from fourth through twelfth grade students (N=954). All sources of self-efficacy were strongly correlated with each other and with the self-efficacy variables. Regression analysis revealed that the sources collectively explained between 33% and 46% of the variance in students' self-efficacy. Although vicarious experience was unrelated to self-efficacy, all four sources were related to self-efficacy for self-regulation. Mastery experience and negative physiological states were the strongest predictors of self-efficacy. Keywords: Self-efficacy, science, sources of self-efficacy, rural, Appalachia.

Self-Regulation Skills, Habits, and Beliefs of Undergraduate Biology Students
John Eric Lingat, Cara Worick, and Dr. Ellen Usher
University of Kentucky

Evidence shows that self-regulated learning skills, such as planning, monitoring and evaluating one's progress toward academic goals, leads to increased motivation and greater academic achievement (Dent & Koenka, 2016; Zimmerman, 1989). Despite the theoretical and practical importance of understanding self-regulated science learning, minimal research has been conducted on self-regulation in science courses (Dunn & Lo, 2015). The purpose analyses will identify the self-reported study skills and habits used by college students with high, average, and low levels of self-regulation, and examine the relationships between self-regulation, self-efficacy for self-regulation, self-efficacy for biology, grit, and course achievement. Undergraduate students (N = 541) enrolled in an introductory biology course at a southeastern university in the United States were asked to report study strategies at four points throughout the semester. Self-efficacy for self-regulation, general self-regulated learning skills, and grit were assessed using pre- and post-surveys. Academic performance and achievement were measured based on final course grades. It is hypothesized that students with average and high levels of self-regulated learning skills will report different study habits and behaviors than students with low levels of self-regulation. Self-efficacy for self-regulation and biology self-efficacy are hypothesized to have a moderate/strong relationship with self-regulation, grit, and to be predictive of academic performance. Further, it is predicted that students who are identified as high self-regulators will have greater self-efficacy for self-regulation, biology self-efficacy, and will receive the highest final course grades. This aligns with related self-regulation research outside the science domain (Karlen, 2016).

Learning Spaces and Self-Efficacy in Undergraduate Statistics
Renae Mantooth, Abigail Love M. A., and Dr. Ellen L. Usher
University of Kentucky

The built environment conveys social, cultural, and psychological meaning that can influence beliefs and behaviors in educational settings (Hauge, 2007). Historically, learning environment research has typically focused on factors other than the physical environment (e.g., student/teacher relationships, organizational structure). This study investigated the relationship between the physical classroom environment and entry-level undergraduate statistics students’ (N = 844) academic beliefs and performance. Students were taught in either a technology-enhanced active learning classroom or a traditional lecture-style classroom. Four primary research questions guided this study: (a) Do students find
the physical learning environment important to their learning? 
(b) Do these perceptions differ at the beginning and end of 
the semester in different classroom settings (i.e., technology-
enhanced or traditional)? (c) Is there a relationship between 
classroom setting and students’ statistics self-efficacy? and (d) 
Is self-efficacy related to final course grade? Data were analyzed 
by examining mean differences, correlations, and regression. 
Nested data structure was accounted for using hierarchical linear 
modeling. Results indicated that students found the physical 
room schoolhouse full of children who may or may not speak 
English. My hat goes off to these remarkable men and women 
who managed multiple grades, multiple languages, and usually 
did so alone, with limited input or assistance from parents who 
probably had even less formal education than their children 
(Graham, 2005). From these early days of teacher preparation, to 
the 18+ years of schooling now required for a teacher candidate, 
much has changed in the realm of teacher education. Social 
constructivism is a theory that looks at how learning is linked 
with our social interactions, and the integration of learners into 
knowledge community. From this perspective, I will look at the 
timeline of the development of teaching colleges (or colleges/
universities that still provide teacher education programs), 
specifically in the Commonwealth of Kentucky.

Crisis and Consciousness: Can White, Middle-Class Teacher 
Candidates Develop Racial and Socioeconomic Self-
Awareness?
Laura Carter-Stone M.S.
University of Kentucky

In response to the increasing diversification of student populations 
within United States public schools, many teacher preparation 
programs seek to develop future teachers’ critical consciousness 
of different racial, cultural, ethnic, and socioeconomic identities, 
and related issues of educational equity and social justice. 
Toward generating such a critical consciousness, many 
programs try to develop a type of “self-awareness” among 
teacher candidates, often characterized as a self-conscious 
and self-reflexive understanding of one’s personal racial, cultural, 
and socio-economic identity and its effects on teaching and learning. 
This paper begins to correct these programs’ lack of theoretical 
foundations and context by employing the socio-educational 
theories of W.E.B. DuBois, Antonio Gramsci, Pierre Bourdieu, and 
Jurgen Habermas to question whether the development of such 
self-reflexive awareness among middle-class, Euro-American 
U.S. teachers is possible, and under what conditions it may be 
cultivated. These theoretical models are then adapted and 
twisted to construct a conceptual map explaining possible 
routes American educators may travel to achieve a deeper of 
awareness of their racial and class identities. We then employ this 
schema to evaluate various types of teacher education programs 
for critical consciousness, and highlight several promising 
models. Finally, we outline the parameters of future ethnographic 
research of teacher education programs which inspire cultural, 
social, and emotional crises in their students.

PAPER SESSION II – Teacher Education
11:30am – 12:30pm | Mt. Storm Room

Facilitator: Holly Johnson
The Comparison of Physical/Virtual Manipulatives on Fifth-
Grade Students’ Understanding of Adding Fractions
Sami Alshehri
University of Cincinnati

The purpose of this quantitative study was to compare two types 
of manipulatives in order to see their effects upon understanding 
of adding fractions for three comparable groups of fifth grade 
students. A total of 163 students who demonstrated low 
mathematical performance participated in the project in order 
to learn the addition of fractions by using physical and virtual 
manipulatives for the experimental groups and the normal 
mathematical curriculum for the control group. The intervention 
occurred during a two-week time frame in six public elementary 
schools. Instructions were provided to all the participants directly 
regarding what the participants were to do each day of the 
2-week experiment. Pre-and post-tests, an attitude survey, and 
a preference survey were used to collect data during the study. 
A repeated measures design with a cross over treatment was 
used for comparing the effects of the two modes of treatments 
compared to a control group. Overall findings revealed that 
fractions performance differed significantly as a function of use 
of manipulative, F(4, 320) = 506.49, p < .001, Ε2 = .86. Also, 
findings revealed that fractions performance was significantly 
better after students were exposed to either virtual or physical 
manipulatives. In addition, results indicated that fractions 
performance was significantly better after students were 
exposed to both types of manipulatives. The change in the final 
scores indicate that using fraction bars as a manipulative tool can 
be helpful in teaching the concept of adding fractions because 
students build a better conceptual understanding of the concept 
of fractions.

Kentucky Teacher Education 1792-1912
Laura Brown
University of Kentucky

American teacher education (Normal Schools) started with the 
intention of filling the need for qualified elementary school 
teachers all across the Northeast, Midwest, and South (before 
westward expansion). It is important to point out that middle 
school, high school, and college education did not really exist 
at this point. So, a teacher was anyone who had completed the 
8th grade and finished at least 1 additional year of studies (or 
sometimes less) in an attempt to prepare them for life in a one
Facilitator: Vicki Plano Clark

Impacting the Transition from Learner to Fluent Speaker: Adult Learners’ Imagined Communities and Possible Pedagogy

Selena Ramanayake
University of Cincinnati

The purpose of this paper is to explore the complexity of international undergraduates’ imagined communities (ICs) and how this construct in pedagogy may empower these learners. ICs are language communities that learners aspire to as they learn a language. I will present the results of a semester-long case study examining eight learners’ ICs and the importance of ICs in their language instruction. In two interviews, three journals, and one questionnaire, undergraduate English as a Second Language (ESL) learners communicated how they (a) conceptualize their ICs, (b) connect their English learning to their ICs, and (c) believe an instructor can incorporate ICs into the classroom. Findings indicate these beginner and intermediate ESL learners’ ICs are interrelated communities that encapsulate current and future goals. One Chinese learner noted that understanding her English IC (e.g., chemical academia) in the classroom made her realize [her] English purpose and know better what [she] should do to build language skills that relate to her future goals. Findings also indicate that learners do not often consider the nonlinguistic aspects of their ICs (i.e., acting or dressing like members of the ICs) that will help them be successful members of those ICs. Further, several learners cited thinking as an important skill for reaching their ICs, but did not always know what this meant within their specific ICs. This session will be most informative to teachers of adult international learners because it will help them understand how ICs in pedagogy may help empower learners in the classroom.

Big Book Shared Reading and Interactive Writing Instruction with Kindergarten Children Who are English Learners

Elizabeth Lowrance Faulhaber MAT, Cheri Williams Ph.D., and Tina Stanton Ph.D.
University of Cincinnati

Schools in the United States are educating a growing number of English learners (ELs) (i.e., children who are learning English as an additional language). Despite the importance of writing to academic performance, little research exists on early writing instruction with young ELs. We set out to examine the effectiveness of Big Book Shared Reading (BBSR) and Interactive Writing Instruction (IW) (McCarrier, Pinnell, & Fountas, 2000) in supporting young ELs’ early writing development. We also examined the nature of the teacher’s instruction and the children’s appropriation of that instruction. We introduced the approach in one kindergarten classroom in a public primary school in the greater Cincinnati area. Six focal children who were ELs were the targets of our investigation. We conducted a convergent parallel mixed methods investigation (Creswell & Plano Clark, 2011) to examine (1) the impact of the instructional approach on English learners’ use of target vocabulary words, knowledge about phoneme-grapheme correspondence, and use of print conventions, as well as (2) the nature of the teacher’s instruction and children’s appropriation of that instruction. Preliminary results from the quantitative strand using a single-subject across-behaviors design demonstrated growth from all students in all variables. The qualitative strand of the study is still underway.

The Role of the Top Part of the Word in Reading

Xiao Luo and Dr. Hye K. Pae
University of Cincinnati

Purpose: L1 script’s influences on L2 reading were examined, as Chinese, Korean and English scripts are different from one
During a Golf Swing
Modifying Stance Alters the Peak Knee Adduction Moment

Effective interventions to address the hesitancy and change for parental childhood vaccine hesitant behavior are known, but not childhood vaccination behavior. Conclusion: The reasons for parental childhood vaccine hesitancy or described an intervention addressing parental childhood vaccine hesitancy. Methods: Included articles explored the reasons for parental childhood vaccine hesitancy or described an intervention addressing parental childhood vaccine hesitancy in the United States, and were published in English between 2005-2015. Results: Studies suggest that parents hesitate due to concerns about safety and lack of concern for the diseases the vaccines prevent. Some interventions to address hesitancy have been effective at changing childhood vaccine hesitant attitudes but not childhood vaccination behavior. Conclusion: The reasons for parental childhood vaccine hesitant behavior are known, effective interventions to address the hesitancy and change childhood vaccine behavior still need to be developed.

Modifying Stance Alters the Peak Knee Adduction Moment During a Golf Swing
Quentin L. Hooker, Robert Shapiro, Terry Malone, and

Square Symbols or Mazes: A Review of Literature on Chinese Word Processing
Jing Sun
University of Cincinnati

It takes native English speakers longer to learn Chinese to an advanced level than to learn other alphabetic languages such as French and Spanish due to contrasting writing systems, Chinese's orthographic difficulty, and complex word boundaries (Baxter, 1997; Anderson & Chen, 2013; Perfetti & Liu, 2006). Psycholinguistic theories and empirical research have largely contributed to word processing of English or other alphabetic languages (Dijkstra & Van Heuven, 1998; Kroll & Stewart, 1994; Pinker, 1999; etc.). It is imperative to delve into the baffling area of Chinese as a foreign language (L2) word processing for more successful L2 Chinese reading proficiency. By comprehensively reviewing 23 empirical studies on both L1 and L2 Chinese word processing (including single characters and compound words) published in peer-reviewed scholarly journals since 2000, this literature review attempts to provide a theoretical framework for empirical research on L2 Chinese word processing by adult L1 English speaking learners, in order to decipher confounding factors in Chinese word recognition, to suggest instructional implications in Chinese reading, as well as to generate theories in terms of L2 Chinese word processing.
walking speeds. The normal weight group consisted of 3 conditions: unloaded (normal body weight) and loaded (centrally and peripherally), which increased BMI by 5 kg/m². Weight gain may be able to be modeled during stair descent. It may be possible to use an acute load to determine the biomechanical effects of weight gain and how this contributes to obesity.

**Understanding the Link between Mindfulness, Sexual Satisfaction, and Relationship Satisfaction**

Elizabeth Greer
University of Kentucky

The purpose of the present study was to examine the correlation between the five facets of mindfulness and how they relate to sexual satisfaction, and relationship satisfaction. Among 4 orientation groups (bisexual, straight, gay, lesbian) 809 individuals in romantic relationships completed measures of the five facets of mindfulness (observing of experience, describing with words, acting with awareness, non-judging of inner experience, non-reactivity to inner experience), relationship satisfaction, and sexual satisfaction. Results from 2 multivariate analyses revealed that relationship satisfaction has a high significance rate among three of the five facets of mindfulness – acting with awareness, describing with words, and non-judging of inner experience. Sexual Satisfaction only revealed a high significance rate with non-judging of inner experience. Non-judging of inner experience facet of mindfulness is the only facet linked to both relationship and sexual satisfaction. This provides understanding in establishing that overall satisfaction is obtained when individuals are able to take a non-evaluative stance towards their sensations, cognitions, and emotions. Results also revealed that an assortment of factors should be considered when determining one’s overall satisfaction in a relationship. Future research on mindfulness and sexual satisfaction may benefit from targeting the “non-judging of inner experience”. Implications for clinical practice and future research will be discussed.

**Mother-Infant Bedsharing: Parental Perceptions and Cultural Influences**

Jodi Cunningham
University of Cincinnati

Traditional public health messaging has not promoted mother-infant bedsharing as a safe practice. Mother-infant bedsharing has notable risks and benefits. Despite recommendations tailored against mother-infant bedsharing, research shows that the practice is common among parents. Understanding parental perceptions and cultural components that influence mother-infant bedsharing can help inform public health professionals about how to best serve families making choices about infant sleep arrangements. The purpose of this paper is to identify parental perceptions and cultural influences that lead parents to bedshare with infants. Preliminary findings indicated that articles were primarily qualitative in nature. Further research using survey methodology with mothers from different ethnic groups may provide more information about knowledge, practices, and cultural influences for mothers.
(84% women; 83% White). Following data collection, an ANOVA and correlation analyses were run to examine the relationships among light, moderate, and vigorous exercise self-efficacy, the four sources of self-efficacy, and exercise behavior. Students were categorized based on whether or not they reported at least 30 minutes of moderate exercise 5 days a week (Centers of Disease Control and Prevention, 2015) and comparative analyses were conducted. Preliminary results showed that mastery experience and social persuasion were the sources most closely related to overall exercise self-efficacy. Individuals who met the recommended amount of exercise reported significantly higher exercise self-efficacy than individuals who did not meet the recommended amount of exercise. Additional analyses will clarify these relationships further.

**The Impact of Study Abroad on Time-to-Degree**

**Jie Dai**
University of Kentucky

The demand for study abroad learning experiences is rising steadily in recent years. The number of U.S. students studying abroad increased by 5% in 2013/2014 and has more than tripled in the last two decades, reaching a new high of 304,467 (Institute of International Education, 2015). However, there are also some concerns that study abroad could detract students from efficient degree completion. Few studies examine the impact of study abroad on more concrete measures of college success, such as time-to-degree, academic performance, degree completion, and career input. Concrete data on time-to-degree between study abroad participants and non-study abroad participants will be the most effective way to address this concern. To gain a better understanding of how study abroad participant affects time to degree, this study investigated the following research questions: Does time-to-degree differ between study abroad participants and non-study abroad participants? Or Does a relationship exist between study abroad participation and time-to-degree? If there is a relationship between study abroad participation and time-to-degree, how the relationship would change by controlling for race, combined SAT score, and GPA at last semester? Did the addition of an interaction term between study abroad and GPA included in the model could estimate a better relationship between Study abroad and Time-to-degree?

**Effects of Team Skills on Student Self-efficacy**

**Christine Tonnis**
University of Cincinnati

This project will first review the literature regarding the effects of team skills on self-efficacy and life satisfaction. The project will use existing literature to connect the implications of increased self-efficacy and team skills on the general population and, when available, on college students. Findings from the literature were applied in an educational module for a course containing engineering students participating in a mandatory work integrated learning program at a large public university in the United States. Team skills intervention was provided for these students as a component of the module. Quantitative data was collected from the students by surveys containing self-efficacy scales and team skills self-assessments. Quantitative data was also collected, using the same surveys in a combined form, from a group of first year students enrolled in the same program, but who had not yet participated in work integrated learning experience. Results were analyzed to determine if the team skills scaffolding impacted self-efficacy of students. Results and implications will be shared with faculty and graduate students at the university. It is hoped that the results of this project will illuminate the impact of team skills on student self-efficacy, a component of life satisfaction.

**Agency, Identity, and Well-being: A Dissertation Proposal on Black Women in the Academy**

**Khahlia Sanders**
University of Cincinnati

Although Black women are the fastest growing degree-granting recipients of higher education, academia is still a hostile environment for this population (Gonzalez & Harris, 2012). Employing a Black Feminist theoretical framework, this proposed study seeks to describe how Black women in the academy exhibit resilience despite hostility from peers, students, and administration. In this presentation, I will discuss: 1) how theory informs my methodological choices, 2) a description of the proposed mixed methods study, and 3) various rationales to support exploring this topic in a novel way. This proposed study will provide insights to the experiences of black women in the academy and inform academic institutions on significant ways to support women of color faculty members throughout their academic careers.

**PAPER SESSION III – Research Methods**

**1:30 – 2:30p.m. | Mt. Washington Room**

**Facilitator: Jacinda Dariotis**

**Design Strategies for Multilevel Mediation Studies**

**Kyle Cox and Ben Kelcey Ph.D.**
University of Cincinnati

Group-randomized studies allow for the examination of interventions in group settings while mediation analysis provides a method to assess the theories of action behind an intervention but literature regarding design strategies combining these elements (i.e., multilevel mediation studies) has been sparse. It is important to consider what design strategies are likely to increase the sensitivity and feasibility of these designs. In this study, we use recently derived formulas to estimate the variance of and power to detect upper-level mediation effects in two-level group-randomized studies (i.e., 2-2-1 mediation) using the asymptotic Sobel test and the resampling based Monte Carlo confidence interval method. To identify design strategies and explore their implications we probe the relationship between parameters in these formulas and power. Results are illustrated using a hypothetical school-randomized trial and indicate a non-monotonic relationship between power and mediator variance explained by covariates and between power and the a path coefficient. Despite the complexities, we conclude that with careful planning group-randomized studies of upper-level mediation are possible with practical sample sizes.
Transforming the Science of Scale Development through the Collaborative Methodology of Concept Mapping  
Cijy Elizabeth Sunny, Dr. Daniel McLinden, and Dr. Kathie Maynard  
University of Cincinnati

Meeting Science, Technology, Engineering, and Mathematics (STEM) workforce (healthcare, defense, etc.) demands requires students to have positive attitudes and persist through the STEM pipeline (educational pathway for students in STEM fields). Because attitudes and interests towards STEM develop at an early age, it is important to develop and measure these early on as these are motivators towards pursuing STEM fields and careers. Instruments that have been developed have mostly used traditional scale development process of reviewing the literature on current instruments, expert consultation, peer review, and conversations with target groups to develop the conceptual domain and guide their scale development. While this is a well-established and validated approach, it does not however build on the ideas of the various stakeholders (students, parents, teachers, researchers, educators, and professionals) that are involved at improving the STEM pipeline. Needed is an instrument created with input from these stakeholders because the diverse perspectives of stakeholders conceptualizes the attitude and persistence domain from the standpoint of those who are in a position to directly influence and support students. Additionally, they are jointly involved in developing measures through their knowledge of working in STEM that legitimizes their role and gives them representation by including their voices to an instrument developed in this unique manner. The current study uses concept mapping, a structured, valid, mixed methods participatory research approach for representing the multiple and diverse perspectives of stakeholders. The rationale and steps involved in stakeholder involvement and as a necessary input to instrument development will be discussed.

Comparison of Current Trends in Federally Funded Mixed Methods Research Projects: Initial Analysis  
Sinem Toraman, Vicki L. Plano Clark, Ph.D.  
University of Cincinnati

Mixed methods research is being used increasingly in a variety of disciplines and defined as a methodology that involves collecting, analyzing, and integrating diverse perspectives and methods in a single study to better understand a phenomenon (Creswell & Plano Clark, 2011). The purpose of this study is to present the comparison of current trends in the use of this methodology in federally funded mixed methods research study abstracts found within National Science Foundation (NSF) and National Institute of Health (NIH) federal agency databases. This examination explicitly provides an insight about the expectations of different funding agencies and how these expectations affect the trends of using mixed methods research in different disciplines over time while federally funded support for mixed methods projects is on the rise. This study also concludes the potential solutions to working on different database and having access to the data as well as visualizing the results.

Understanding Non-Profit Board Service: New Perspectives on For-Profit Motivations  
Gary Jones, Denise M. Cumberland, and Kevin Rose  
University of Louisville

While substantial theoretical and empirical research into non-profit organization (NPO) board roles and behaviors exists, there is scant knowledge regarding the for-profit executives and managers who function as the primary source of volunteers on these NPO boards. Why do firms provide encouragement and opportunity for members and employees to serve on NPO boards? What tangible and intangible benefits accrue to for-profit organizations, and at what cost? Three theorized organizational motivations might explain for-profit behavior of providing volunteers to lead NPOs by serving on boards of directors. First, facilitating members’ service on volunteer boards allows for-profit firms to associate their brand with charitable causes that improve communities or societies. Second, the varied experiences and challenges encountered during service on NPO boards can develop for-profit employees, assisting career development efforts by grooming leaders for increasingly important roles in the for-profit sector. Third, by permitting employees that value volunteerism so serve on an NPO board, firms strengthen their relationships with employees; these opportunities enhance perceptions of organizational support, an important antecedent to organizational commitment. Two avenues of research are indicated: 1. To what extent do these three theorized motivations influence for-profit volunteerism on NPO boards? Under which conditions is a particular motivation the proximal cause of this behavior? 2. How do anticipated costs and benefits compare with experienced results from for-profit volunteerism on NPO boards? A mixed-methods research design is recommended: initial qualitative interviews with for-profit leaders designed to identify motivations, conditions, costs, and benefits, should be followed with subsequent broad survey research.

Examining the Factors which Create and Sustain a Dynamic Research Environment at an Academic Medical Center: Literature Review  
Jay Godby, M.B.A, M.A.Ed.  
University of Louisville

The principal objective of this paper is to define and expand upon the factors that enable Academic Medical Centers (AMCs) in the United States to perform the necessary research in which life changing discoveries are identified. There are numerous internal and external challenges facing the production of research in AMCs including administrative duties, private industry talent competition, and the high cost of performing research in the midst of increasing clinical duties for research oriented physicians. Synthesizing and understanding the factors which contribute to a productive research environment will enable chief administrators to pursue goals oriented in the research sector, which directly correlate with the missions of most, if not all, AMCs. Factors that lead to and sustain the desired level of research in an AMC are derived as personal and environmental. Personal factors such as mentorship, motivation, autonomy and orientation contribute to research success. Environmental factors pertaining to organizational mission or culture, decentralization, resource availability, and leadership directly enable researchers to perform to the best of their personal ability. Execution of this Literature Review revealed that the importance placed on clinical duties in an AMC has a tremendous effect on creating and sustaining a dynamic research environment, however ample investigation has not been performed with regard to this conundrum. The paper concludes by recommending pursuit of the identified factors for research production, as well as the need to develop more understanding of the impact of clinical operations on an AMC’s research environment.

2017 Spring Research Conference
Parental Influence on Children’s Nature Play: A Sociocultural Approach
Ann Rossmiller
University of Cincinnati

Previous research has shown that children learn not only through play but play in natural environments (Carr & Luken, 2014). The current study looks at how parental attitudes’ impact learning through nature play by examining literature relating to the transmission of attitudes from caregiver to child (Dalton, 1982; Jennings et. al, 2009). Also, it aims to investigate current findings describing how parental attitudes not only affect children’s engagement, or dosage, with nature, but their attitudes towards the environment as well (Bovee-de Pauw, 2013; Casalo & Escario, 2016; McFarland et. al, 2014). Based on these findings, I then present my analysis regarding the results of a survey administered to 4 preschool centers in the Cincinnati area and discuss its implications; specifically focusing on the open-ended responses where parents were able to list what they consider the benefits and drawbacks of children playing outdoors in nature. My concluding remarks suggest not only the critical role nature engagement has on child development but also that the effect parental attitudes have on the degree of such benefit, especially when modeled.

Summer Field-Based Collaborative Urban University and Urban School District Teacher Induction Experience
Sandra Hogue
University of Louisville

Abstract One of the greatest national challenges facing the teaching profession is teacher retention in hard-to-staff schools. Traditionally, urban districts struggle in their efforts to retain qualified teachers in schools with high poverty, high minority, and low achieving student populations. The purpose of this refractive phenomenological study is to capture the essence of the lived experiences of newly hired urban teachers who participate in a collaborative university and school district summer field-based induction experience. Each participant will work alongside an experienced urban educator and an instructional coach as all participate in ongoing professional development provided by both the university and school district. Participants will serve as active team members teaching in a summer reading enrichment program with rising first and second grade students who did not reach benchmark expectations at the end of the school year. Data collection will include participant interviews, observations and PhotoVoice-designed focus group discussions. Implications for further research and practice will be discussed. Keywords: teacher retention; urban teachers; urban schools; teacher induction

The Roots of Self-Efficacy in Undergraduate Engineering
Xiao-Yin Chen, Madelyn L. Roeder, Alecia Johnson, and Ellen L. Usher Ph.D.
University of Kentucky

The purpose of this study was to examine the types of experiences that affect undergraduate engineering students’ self-efficacy and to examine gender and year-level differences. Self-efficacy, the perception of one’s ability to accomplish a task, has been shown to be a strong predictor of student effort and achievement in various educational settings (Honicke & Broadbent, 2016; Richardson et al., 2012). Few studies have extensively investigated the types of experiences (e.g., teacher encouragement, role models, grades) that influence the self-efficacy of students studying engineering. Undergraduate engineering students (N = 654; 26.8% women) attending two large, public universities answered the open-ended questions: What events have affected your confidence in your engineering skills? How did the event(s) affect your confidence? Using Bandura’s four hypothesized sources of self-efficacy and previous coding schemes (i.e., Butz & Usher, 2015) as guides, researchers developed 27 codes to evaluate students’ responses. Each response also received a code for its valence (i.e., whether it raised or lowered self-efficacy). Two raters coded each response with high level of agreement. Students most frequently reported academic mastery experiences (40.2%) followed by cooperative/internship mastery experiences (7.0%) as sources of their self-efficacy. Women (7.2%) were more likely than men (4.1%) to describe comparing themselves to others when judging their self-efficacy. Difficulties with coursework lowered students’ self-efficacy. Student responses identified numerous ways in which instructors and universities can better support students’ self-efficacy, learning, and persistence in engineering.

Effectiveness of a Refutational Text on Teachers Understanding of Influenza
Ashley Vaughn
University of Cincinnati

Influenza is a potentially life threatening and costly viral infection, during the 2014-15 influenza season, the United States saw at least 40 million flu infections, 19 million medical visits due to influenza related problems, and 970,000 hospitalizations. While the CDC recommends a yearly influenza vaccine to all individuals age six months or older, only one third of adults aged 18-49 were vaccinated. The CDC also estimates that nearly 7 million school age children (5-17 years) were infected by the influenza virus during the 2014-15 season. These individuals have a 30-50% influenza attack rate as well as remain contagious longer; because of this, schools play an important role in the management of influenza outbreaks. As such, school age children and their teachers are an important subpopulation for disease control and education. However, there is a scarcity of research
currently on the rate of influenza vaccination among teachers. Additionally, teachers hold similar understandings of microbes as their students, and both teachers and students have a general lack of understanding about microbial pathogens and immune response (such as in influenza). In this study, we first assess attitudes towards influenza vaccination and the misconceptions about influenza held by pre-service and early career teachers. We then assess the effectiveness of a refutational text on these attitudes and misconceptions.

**Scale development: A How-to Guide!**

Christen Dillon, Abigail Love, Ph.D., Renae Mantooth, and Ellen L. Usher, Ph.D.
University of Kentucky

This study aims to explain the process involved in developing a scale that demonstrates an appropriate degree of evidence for validity. Validity is a crucial step in the research process (American Educational Research Association [AERA], American Psychological Association [APA], & National Council on Measurement in Education [NCME], 2014, p. 11). Using valid response items to support the scores they generate within empirical inquiry in social research contexts is fundamental to completing a functional study (DeVellis, 2012). When a researcher chooses to develop a scale without appropriate attention to contemporary measurement standards, results cannot be translated with confidence (Thorndike & Thorndike-Christ, 2012). Further, many researchers note the challenges of poorly built scales including problems of predictive relevance, obscurity of meaning, and inaccurate results (Bandura, 1997). To streamline the scale construction process and provide applied researchers with a means of creating more quality instruments, this presentation will feature a guide that is specifically relevant to Likert-type attitude scales often used in social research contexts. The progression will include: (a) systematic review of literature, (b) repetitive item writing, (c) outside reviewers, and (d) required statistical analyses, with a focus on exploratory and confirmatory factor analysis. Also, because multiple sources and degrees of validity evidence are needed to ensure usable test results, each step in the method will be aligned with the aspect of validity evidence it provides (e.g., item content aligned with theory provides test content evidence) in accordance with modern measurement standard practices (AERA, APA, & NCME, 2014).

**How to Change the World: The Relationship Between Social Media and Social Justice in the Classroom**

Sarah Jernigan
University of Cincinnati

This study analyzes an undergraduate course taught at the University of Cincinnati that strives to change the world. The primary method that this is attempted through, is by raising awareness and sending calls to action through Twitter. Social media has not only proven to excel awareness for non-profits, but also serves as a platform for individuals to express themselves and even perform collective action (Foster, 2015). This study adds to the literature on how social justice can be accomplished through the aid of social media. It also adds to the literature on how significantly awareness can be increased through the course of a semester in a college classroom. The research questions for this study are: RQ1: What is the relationship between social media and social justice? RQ2: What techniques are effective in raising awareness of prejudice and/or bias in the classroom? This is a practitioner action research (PAR) project, PAR is defined by Cochrane-Smith and Lytle (2009) as "an umbrella term to encompass multiple genres and forms of research where the practitioner is simultaneously a researcher who is continuously engaged in inquiry with the ultimate purpose of enriching students’ learning and life chances" (p. ix). Data collection occurred in two forms. The first though analyzing students’ weekly tweets and the second through interviews conducted at the beginning and end of the semester. This study adds to the fields of social media usage and social justice awareness and provides another example of how the two can be used in conjunction. Cochrane-Smith, Marilyn & Lytle, Susan. (2009). Inquiry as a Stance: Practitioner Research for the Next Generation. New York: Teachers College Press. Foster, M. D. (2015). Tweeting about sexism: The well-being benefits of a social media collective action. British Journal of Social Psychology, 54(4), 629-647. doi:10.1111/bjso.12101

**Teacher Self-Efficacy for Teaching Students with Autism: Associations with Stress, Teacher Engagement, and Student Outcomes**

Jordan Findley and Abigail Love Ph.D.
University of Kentucky

Teacher self-efficacy refers to teachers’ beliefs about their capability to teach. Although teachers reporting high teaching self-efficacy demonstrate positive teaching behaviors, lower teacher stress, and superior classroom management techniques, surprisingly few studies have shown a direct relationship between teacher self-efficacy and student outcomes (Zee & Koomen, 2016). The purpose of this study was to explore self-efficacy specific to teaching students with autism spectrum disorder (ASD) and examine relationships with teacher stress, teacher engagement, and student Individualized Education Program (IEP) outcomes. Special education teachers (N = 44) were recruited as part of a larger randomized controlled study examining a consultation intervention, the Collaborative Model for Promoting Competence and Success (COMPASS), for teachers of students with ASD. Results indicated that teachers who received the consultation intervention reported higher levels of self-efficacy for teaching students with ASD at the end of the school year. Further, self-efficacy for teaching students with ASD was significantly and positively correlated with teacher engagement and student outcomes, and negatively correlated with teacher stress. This is the first report of a direct association...
between teacher self-efficacy and student IEP outcomes and the impact of a teacher consultation intervention on the teacher intrapersonal, within the individual, factor of self-efficacy.

How Step Count Increase Affects Role Limitations for People Living with HIV/AIDS

Olivia Estill
University of Louisville

Individuals living with HIV/AIDS experience many struggles beyond those associated with physical illness. These include psychological stress and depression, which can greatly impact everyday life. This secondary data analysis was conducted to examine a potential relationship between increase in physical activity and quality of life for people living with HIV/AIDS (PLWHA). Methods: Participants were recruited as part of a PA intervention aimed to reduce risk factors of CVD for PLWHA taking ART. A secondary data analysis was conducted by separating participants into groups according to step count. Assessments were conducted at baseline and 18 weeks. Self-reported mental health was measured using the SF-36. This analysis focuses on the subscale role limitations due to emotional wellbeing (RE). PA levels were measured via accelerometer and determined by average step count/day. Results: 34 females and 28 males with valid armband data were used for final analysis. No significant differences were observed between groups at baseline. Those who increased their PA from baseline had an average increase of 1502 steps/day and showed significant increase in their self-reported RE score from 18.18 ± 6.84 at baseline to 40.91 ± 7.89 at 18 weeks on the SF-36 (p = 0.03). Those with no changes/decreased PA by an average of 1195 steps/day showed no change. People living with HIV/AIDS who increased their step count by 10% after 18 weeks showed a significant increase in RE. A relationship between physical activity and emotional well-being could provide a foundation for further study regarding quality of life and chronic disease.

Musculoskeletal Outcomes from Chronic High-Speed High-Impact Resistance Exercise

Ema Selimovic
University of Louisville

Progressive bone loss is a serious side effect of extended spaceflight. In addition, geriatrics and postmenopausal women are also prone to progressive bone loss that may lead to osteopenia and osteoporosis. Bones are living tissues that are constantly reshaping themselves, due to the activities of osteoblasts and osteoclasts, from the stresses placed upon them. When bone is broken down more rapidly than it is formed, bone mineral density and content decline. With prolonged spaceflight, bone mineral density and content decrease due to reduced stress on the bones that results from accelerated osteoclast activity. Numerous exercise modalities have been examined that seek to offset progressive bone loss. Our research project sought to optimize bone remodeling through dynamic high-speed exercise that includes impulse loading with high peak strain magnitudes, rates, and frequencies. The device used in this study is called an Inertial Exercise Trainer (IET; Impulse Training Systems, Newnan GA). 13 subjects were enrolled in the study; each performed 30 workouts on the IET that targeted the lower-body weight-bearing musculoskeleton. Only the left legs of subjects performed IET workouts; their right legs served as untreated controls. Before and after the 30 workouts, subjects underwent isokinetic strength testing (knee/ankle extensor muscles of both legs), lower body DEXA scans (hip/knee/ankle regions), and blood draws to quantify changes in bone formation and resorption.

Understanding Adolescent Suicide: Parental Knowledge of Warning Signs, Risk Factors and Perceived Confidence in Help-Seeking

Michelle Burbage
University of Cincinnati

The present study will examine the knowledge of risk factors and warning signs parents have regarding suicide among adolescents. Moreover, the study will assess parent’s help-seeking behaviors if their child was suicidal or experiences mental health problems. Potential correlations between knowledge as well as help-seeking behaviors and parent demographics including sex, ethnicity, martial status, educational level, and sex of child will be examined. The study will also explore differences between parents and non-parents. This study is critical as recognizing parent’s knowledge pertaining to suicide, such as knowing the warning signs and where to seek help, is needed to aid in the development of effective suicide education programs targeting parents. Thus, potentially decreasing suicide attempts among youth. Preliminary study findings will be presented. In addition, as part of this presentation a review of the literature on suicide prevention will be presented. Strategies for reducing suicide among youth will also be discussed.

A Mixed-Methods Evaluation of an After-School Obesity Prevention Intervention Using Student-Generated Commercials and Goal Sheets

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The Children’s Healthy Eating and Exercise Program (CHEE) is an after-school obesity prevention program. The 2015-2016 CHEE took place in local elementary schools and occurred over several 9-week programs. On the final day of each session, the elementary school youth were asked to work in teams to design and present a commercial to their classmates. These commercials were intended to give the children an opportunity to share what they learned during their time with the CHEE program. The children were given independence in choosing the topic, and identified the lessons which stood out most. The children also filled out daily eating and exercise goal sheets or journals with college students, who served as their coaches and they identified ideas for reaching their goals and overcoming any roadblocks toward their goals. Data collected from this program are unique in that children’s perspectives were recorded using qualitative data from commercials children developed to demonstrate their learning, and data from goal-setting activities that the children participated in with coaches to develop individualized eating and exercise goals. A mixed-methods review of this data will be presented along with an assessment of program effectiveness.
Examining Team Cohesion in the Performing Arts: A Pilot Study in Exploring Team Mental Models

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Increasing knowledge about team cohesion is a topic of research among many sports psychologists as an attempt to learn how to measure team mental models and improve performance outcomes of the team. Mental models allow individuals to use knowledge they already possess by organizing it to form their perceptions of reality (Lim & Klein, 2006). Researchers used the framework of mental models to develop Team Mental Models (TMM) and how it effects team performance starting in the early 2000s. However, TMM have proved challenging to measure. Although there are several theoretical papers about TMM, applied and empirical work has lagged behind because of struggles with how to accurately measure TMM concepts (Mohammed, Klimoski, & Rentsch, 2000). The purpose of this study is to increase knowledge of TMM by using performing artists as the sample. Rouse and Rouse (2003), suggest that performing arts teams are of particular interest because the performance is the entire outcome of the team verses other team structures which might include goals of victory, trophies, or profit gains. Limited research exists on TMM with performing artists (e.g., musicians, dancers, and actors), therefore, the proposed method for gathering data is using the Group Environment Questionnaire (GEQ). This survey measures 18 items of group cohesion and is a choice of researchers’ starting point in measuring team cohesion (Filho, Dobresek, Gershgoren, Becker, & Tenenbaum, 2014; Filho, Tenenbaum, & Yang, 2015). Recommended future studies and methods to measure team cohesion pertaining to performing artists will also be provided.
See you in Louisville in 2018!