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2011 Research Day Abstract Listing

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Research Day 2011

Highlighting and recognizing graduate and undergraduate student research throughout all disciplines at the University of Northern Colorado.

University of Northern Colorado's
Annual Research Conference during
Academic Excellence Week

April 7, 2011
University Center

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Research Day Abstract Listing

By Primary Presenter, Last Name

Adamson, Aaron

Autonomous Rover Exploration in a Simulated Extraterrestrial Environment

Presenters: Adamson, Aaron; Aken, Jordan; Alcala, Diego; Tryba, Spencer

Undergraduate Presentation

Faculty sponsor: Semak, Matthew

Physics

Poster Presentation

Mt. Evans Ballroom

01:30 - 02:30 in the Afternoon

The goal of this project will be to develop an ultrasonic proximity sensing array and supporting systems for obstacle detection and navigation in an autonomous robotic platform. This will involve thoroughly characterizing the performance of the ultrasonic sensors, using barometry and temperature data to self-calibrate measurements, and applying this data to autonomous navigation in a simulated off-planet environment. The readings from the proximity sensor array will be integrated with inertial data, odometry, and radio localization to allow the rover to independently traverse unfamiliar terrain. The total data collection capabilities will include proximity sensors, accelerometers, gyroscopes, magnetometers, atmospheric pressure sensors, temperature sensors, quadrature encoders, and a short range radio positioning system. This project involves numerous applications of physics and math concepts, and is relevant to many ongoing efforts in developing autonomous exploration capabilities.

The final aim of this project is the creation of a low-cost, compact, and robust platform that can navigate with zero human interaction. The development of reliable and accessible obstacle avoidance and localization systems will be useful in many different fields. Autonomous and semi-autonomous rovers have been used in research and space exploration to great success; the need for flexible and capable autonomous platforms will only be increasing in the future.

This research is currently at a conceptual and prototyping stage, with a focus on algorithm development and sensor characterization. Systems integration will be taking place in late February, with testing and revision beginning in March. The sensor array and the supporting autonomous systems will be completed in time for trials in April.

Ahmad, Tariq

Sports and location-based services

Presenters: Ahmad, Tariq
Graduate Presentation

Faculty sponsor: Gray, Dianna
Sport & Exercise Science

Poster Presentation
Mt. Evans Ballroom
01:30 - 02:30 in the Afternoon

Social media is defined as “online media where people are talking, participating, sharing, networking, and bookmarking online (Ward, 2010). It is a hybrid element of the promotion mix because in a traditional sense it enables companies to talk to their customers, while in a non-traditional sense it enables customers to talk directly to one another (Mangold & Faulds, 2009).

I will examine sports fans’ usage of location-based services (LBS), a form of social media, to support their favorite sports teams. LBS is defined as ‘an information or entertainment service, accessible with mobile devices through the mobile network and utilizing the ability to make use of the geographical position of the mobile device’ (Quercia, 2010). Surveys will be disseminated electronically to participants who use LBS. There are two research questions: 1) What is the relationship between LBS and how sports fans use them to support their favorite sports team? And 2) Do participants use one specific LBS site over another?

Social media is a relatively new entity (as with the subset of location-based services), and significant research has not yet been conducted. In turn, there has been substantial research conducted on sports in general, in terms of consumer behavior, fan motives, and loyalty, among many other topics. However, the rationale of the study is that the intersection of sports and LBS has not been researched or discussed, and this study will help to fill the gap.

Aken, Jordan

Cosmic Rays Every Day

Presenters: Aken, Jordan; Kershaw, Elijah; Shiely, Robert; Wallner, Trevor

Undergraduate Presentation

Faculty sponsor: Dietz, Richard

Physics

Poster Presentation

Mt. Evans Ballroom

01:30 - 02:30 in the Afternoon

Cosmic rays are entering the Earth every day. Measuring the amount entering can determine the radiation effects. There is not a sufficient amount of knowledge about the effect of the rays on health, but the amount can be measured and then determined if there is a difference in health with more exposure. Muon detectors were used to determine how many counts and decays over a period of time. Based on the amount of counts health issues could be linked to the exposure of muons.

Alcala, Diego

Effect of Altitude on the Thiele-Small Parameters

Presenters: Alcala, Diego

Undergraduate Presentation

Faculty sponsor: Willis, Courtney

Physics

Poster Presentation

Mt. Evans Ballroom

10:30 - 11:30 in the Morning

Modern Low-range loudspeakers are designed and tested using a set of mathematical guidelines (Thiele-Small parameters), which describe how several common properties of speakers interact with each other. The current Thiele-Small parameters have no mention of altitude (atmospheric pressure), or how the performance of loudspeakers might be affected by a change in altitude. The hypothesis is that altitude will have a measurable effect on the Thiele-Small parameters. By measuring the Thiele-Small parameters of various loudspeakers in 3 different sized enclosures at altitudes of 5,000 feet and 10,000 feet, this research will help to determine whether or not companies, music grounds, and average consumers need to worry about sub-par audio quality sound production at altitudes high above sea level.

Alexander, Michelle

Seasonal Affective Disorder: Causes and Consequences

Presenters: Alexander, Michelle

Undergraduate Presentation

Faculty sponsor: Houser, Jeffrey

Sociology

Poster Presentation

Mt. Evans Ballroom

01:30 - 02:30 in the Afternoon

Seasonal affective disorder may account for the increase in rates of depression among persons with mental illness. This project investigates the causes and consequences of seasonal affective disorder, also known as "the holiday blues." Using both primary and secondary data gathered at the Frontier House, a Greeley based community mental health organization, I will test whether or not an increase in client visits occurs over the holidays, and if the increase is the result of seasonal affective disorder. Results of the study should provide Frontier House administrators with a better understanding of how seasonal affective disorder affects their clientele. Additionally, findings of the study may serve as a tool for the Frontier House staff to help them pay closer attention to their members around the holidays.

AlQahtani, Ragea

The Cultural Divide of Special Education Law in the United States of America (USA) and the Kingdom of Saudi Arabia (KSA)

Presenters: AlQahtani, Ragea

Graduate Presentation

Faculty sponsor: Murry, Francie

Special Education

Poster Presentation

Mt. Evans Ballroom

10:30 - 11:30 in the Morning

In this poster presentation, I will provide a comprehensive overview regarding the major laws for students with disabilities in the USA and the KSA. The laws discussed will include IDEA 2004 and Law Number 224. I will provide a comparison between the implementations from a historical perspective, how they align with one another from a law development process, how religious/political overtones have impacted the implementation processes, and

how the major past and present legal decisions have influence upon the access to education in the two countries. In the presentation, recommendations for the development of educational programs and services for individuals with disabilities will be provided for both countries.

Anaya, Reyna

Social Justice Engagement & Its Meaning for Female, Student Affairs Graduate Students

Presenters: Anaya, Reyna; Slattery, Kristin
Graduate Presentation

Faculty sponsor: Guido, Flo
Higher Education & Student Affairs Leadership

Poster Presentation
Mt. Evans Ballroom
01:30 - 02:30 in the Afternoon

The purpose of this constructive narrative study is to understand how adult, female, student affairs graduate students make meaning of social justice engagement at the University of Northern Colorado and Colorado State University. At this stage in the research, social justice engagement will be defined as an experience where students, faculty, and staff examine their personal identities through self-awareness and critical self-reflection; understanding/deconstruction of the dynamics of privilege, oppression, and systems of power on an individual, systemic, and institutional level; as well as primary stages in ally development. According to Gansemer-Topf, Ross and Johnson (2006), graduate education, which is a process of socialization into the culture, values, and mores of a chosen profession, is influenced by student engagement. Engagement varies in frequency and intensity for each student; however, adult development depends on students' willingness to grow, the challenges encountered, and the support provided (Austin, 2002). The importance placed on engagement needs to be re-evaluated as an essential part of graduate education socialization (Gansemer-Topf, Ross, Johnson, 2006). Findings from this research will elucidate how female, student affairs graduate students' develop through social justice engagement.

Anderson, Suzannah

Research in the Effectiveness of Style and Memory Use in Advertising Campaigns

Presenters: Anderson, Suzannah
Graduate Presentation
Faculty sponsor: Allen, Lin
Business Administration, Communication Studies
Research Excellence Award Finalist

Oral Presentation
Council Room
01:40-01:55 in the Afternoon

This research explores how two canon's of rhetoric, style and memory, affect advertising campaigns.

Style or memory, used separately, can be profitable, but when they are combined creatively, it seems that their effectiveness is maximized.

It has been suggested that style is a powerful tool in advertising; however, the greatest single tool in television advertising seems to be memory. This research will explore and unearth current and information pertaining to these claims within select insurance agencies.

Andrade, Supattra

Preliminary Perspectives of Collaboration for Developing Transition and Vocational Programs for Adolescents with Autism Spectrum Disorders

Presenters: Andrade, Supattra; Lin, Feng-Chen

Graduate Presentation

Faculty sponsor: Jackson, Lewis

Special Education

Poster Presentation
Mt. Evans Ballroom
01:30 - 02:30 in the Afternoon

Presently, transition services are being developed for supporting all students with exceptionalities to increase their vocational skills and life skills for independent living after their high school graduation. The transition process is a necessary program to continue the educational systems to move toward independent living and employment in the social community. The transition process can be a significant challenge for the students with autism spectrum disorders (ASD) to effectively acquire skills to move toward adult living, and social reability. Although, the students with autism have the opportunity to participat

e in the transition process from school services to employment, these students still experience significant failure in employment skills and integrated work.

The purpose of the compilation of research studies demonstrates the collaborative approach of schools, homes, and agencies in the community that increase the quality of the transition programs for contributing to young adults with

Archuleta, Brandon

Virtue Ethics and the Whistleblowing Dilemma

Presenters: Archuleta, Brandon

Undergraduate Presentation

Faculty sponsor: Matchett, Nancy

Philosophy

Oral Presentation

Columbine B

02:40 - 03:15 in the Afternoon

This presentation will argue that virtue ethics gives the best theoretical account of how and why whistleblowing dilemmas arise, as well as the most practical guidance to persons confronted with the decision about whether to blow the whistle. First, I will identify the main features of a whistleblowing situation in order to clarify the nature of the dilemma and explain why whistleblowing dilemmas are best viewed through a virtue ethical lens. After we gain an understanding of how the decisions people make in whistleblowing dilemmas are related to character, we can begin to understand how virtue ethics can provide practical guidance to those facing the whistleblowing dilemma. I will then provide a background on the ethical theory of virtue ethics and clarify concepts like virtue, the golden mean, and happiness. This will lead to an introduction of the concept of a 'regulative ideal,' which is essential to understanding how virtue ethical thinking guides a person's conduct. Next, we will explore how moral intuition relates to a person's regulative ideal and the way intuition often conflicts with ethical judgments. Lastly, this paper will aim to show why a virtue ethical approach to solving the whistleblowing dilemma is superior to the rival moral theories of consequentialism and deontology. The final conclusion of this presentation will be that by following a virtue ethical approach, a person will be prepared to make the correct decision in a whistleblowing dilemma.

Arcibal, Erica

Species Diversification in *Eriogonum umbellatum* var. *aureum*, *majus*, and *umbellatum* in the Colorado Rocky Mountains

Presenters: Arcibal, Erica

Undergraduate Presentation

Faculty sponsor: McGlaughlin, Mitchell

Biological Sciences

Research Excellence Award Finalist

School of Biology Poster Presentation

Mt. Evans Ballroom

12:00 - 01:00 PM

Eriogonum umbellatum (sulfur-flower buckwheat) is a diverse plant species with over 40 identified varieties found in the western United States and parts of Canada. In this project, three varieties of *Eriogonum umbellatum* (vars. *aureum*, *majus*, *umbellatum*) with overlapping distributions are being genetically evaluated. To do so, the amplifications of highly polymorphic regions within the nuclear and chloroplast genomes are aligned, respectively, to determine if hybridization is occurring. This phenomenon occurs when genetically distinct individuals crossbreed and produce offspring expressing genetic qualities of both parents. Over time, these hybrids may be separated from the population and start to diversify, which can lead to the generation of a new variety within the species or even speciation itself. By studying hybridization patterns between the three selected varieties, we can start to understand the mechanisms by which species diversification may occur. Further understanding will also lead to new management strategies of uncommon species, since individuals within newly diversified species and varieties are considered uncommon or rare.

Arevalo, Deisy

"La importancia de ser bilingüe"

Presenters: Arevalo, Deisy; Camacho, Esther; Cruz, Carlos; de la Torre, Susana; Gallegos, Rosaryo; Guerrero-Munoz, Nanci; Hierro, Elsa; Ramos, Mary; Vazquez, Maria

Undergraduate Presentation

Faculty sponsor: Garza, Efrain

Foreign Languages, Spanish

Oral Presentation

Spruce A
09:00 - 09:15 in the Morning

Ser bilingüe hoy en día es algo fundamental. Es una de las mejores oportunidades que ofrece el sistema de educación bilingüe de países desarrollados. Ser bilingüe es más que una cualidad, es una identidad. Es más que ser leal a las raíces de los antepasados. Es poder vivir y experimentar una primer cultura y poder convivir con otras culturas diferentes. Es compartir aspectos culturales con fuerte tradición y llevarlos más allá de las fronteras del peregrinaje a un país huésped con costumbres y tradiciones diferentes. Son culturas que se unen por medio de individuos capaces de por vivir entre dos culturas. Son culturas que se enriquecen con el contacto diario de la diversidad. Con la habilidad de hablar dos lenguajes se tiene la capacidad de tener un mejor trabajo, desarrollarlo al máximo y mejorar la comunicación con otras personas. Además se pueden tener mejores posibilidad en la vida en general. Otros de los beneficios de dominar dos lenguas es poseer la capacidad de interpretar dos diferentes idiomas y tener la ventaja de mejores relaciones sociales. Uno de los mejores aspectos de ser bilingües es que se tiene la oportunidad de ayudar a los que aún no pueden interactuar con los demás como resultado de su monolingüismo. Es una gran ventaja poder hablar dos idiomas con fluidez para ser más útil a la sociedad. En el mundo globalizado de hoy en día existe mucha diversidad y especialmente en este país, hay emigrantes de diversas culturas que se unen como en un crisol en donde se mezcla lo mejor de cada cual para dar como resultado la cultura multifacética. Ser bilingüe significa tener dos mundos al alcance de tu mano.

Auer, Megan

Flushing our money? A cost analysis of fecal immunochemical testing practices

Presenters: Auer, Megan

Graduate Presentation

Faculty sponsor: Hummel, Faye

Nursing

Poster Presentation

Mt. Evans Ballroom

01:30 - 02:30 in the Afternoon

The purpose of these poster presentations is to validate how the Advanced Practice Nurse (APN) can make a difference in the cost of hospitalization or other health care services by collaborating with the patient, family, physician or other individuals or agencies. Eleven cost-benefit projects were conducted by

Family Nurse Practitioner students in which a procedure, healthcare practice or product was evaluated. Recommendations for potential change or modification in procedure or policy are included.

Ballard, Ryan

Democracy through Globalization and Market Reform

Presenters: Ballard, Ryan

Undergraduate Presentation

Faculty sponsor: Fong, Adam

Economics, Interdisciplinary Studies

Oral Presentation

Aspen A

02:20 - 02:35 in the Afternoon

This paper analyzes the influence of economic development on political freedoms in China for now and the future. Political discussions on China's democratization in the foreseeable future seem pessimistic; however, it brings further question to the changes in the role of the state and the economy. Although previous research studies have found a correlation between economic expansion and a democratized regime, (Ming Wan, "The Political Economy of East Asia", 2008) much of the research has ignored the cultural perceptions as well as the necessity to evaluate spectrums of democratic power. In this way, international pressures and technological innovation will catalyze China's process of democratization (Diamond, Journal of Democracy, 2010). This research will evaluate multiple Chinese newspapers as well as previous political case studies to show simultaneous economic and social liberalization. Next, it is necessary to discuss what form of democracy will take place that fits into China's cultural relevancy. Understanding these concepts will aid in conceptualizing China's increasing relationship to a globalized world.

Ballard, Ryan

Democracy Through Globalization and Market Reform

Presenters: Ballard, Ryan

Undergraduate Presentation

Faculty sponsor: Fong, Adam

Interdisciplinary Studies

Poster Presentation

Mt. Evans Ballroom
01:30 - 02:30 in the Afternoon

This paper analyzes the influence of economic development on political freedoms in China for now and the future. Political discussions on China's democratization in the foreseeable future seem pessimistic; however, it brings further question to the changes in the role of the state and the economy. Although previous research studies have found a correlation between economic expansion and a democratized regime (Lipset, *Journal of Democracy*, 1994), much of the research has ignored the cultural perceptions as well as the necessity to evaluate spectrums of democratic power. In this way, international pressures and technological innovation will catalyze China's process of democratization (Diamond, *Journal of Democracy*, 2010). This research will evaluate multiple Chinese newspapers as well as previous political case studies to show simultaneous economic and social liberalization. Next, it is necessary to discuss what form of democracy will take place that fits into China's cultural relevancy. Understanding these concepts will aid in conceptualizing China's increasing relationship to a globalized world.

Bennet, Rachel

Investigation of Lasers and Play-Doh

Presenters: Alcalá, Diego; Arko, John; Bennet, Rachel; Kingsley, Kyle

Undergraduate Presentation

Faculty sponsor: Dietz, Richard

Physics

Poster Presentation

Mt. Evans Ballroom

01:30 - 02:30 in the Afternoon

Ever since George Lucas described Luke Skywalker's light saber as "a green laser beam" which sprang forth from an electronic sword hilt, people have been fascinated by the properties of lasers. For instance, laser light does not change color when pointed at a colored surface. Green light is green whether reflected from a white wall or a red fire engine. However, there is an instance when a green laser breaks this rule: when shone on pink Play-Doh. The goal of this investigation is to determine the exact change in wavelength of the laser light and to find a reasonable explanation for the phenomenon. A secondary goal is to apply the experimental procedures to investigation of a violet laser pen.

Beverly, Daniel

Silviculture Effect on Soil CO₂ Efflux

Presenters: Beverly, Daniel

Undergraduate Presentation

Faculty sponsor: Franklin, Scott

Biological Sciences

School of Biology Poster Presentation

Mt. Evans Ballroom

12:00 - 01:00 PM

Understanding effects of silviculture practices in Colorado helps ensure that the immense value of forests remains stable. Much of the *Pinus contorta* populations in northern Colorado have seen drastic declines over the past decade due to the mountain pine beetle epidemic. Soil respiration is results from decomposers breaking down organic debris and vegetative root respiration. Disturbed habitats generally have an increased amount of organic matter being decomposed. Higher levels of CO₂ efflux are expected in the clear-cut plots, this is due to the projected levels of higher temperature and moisture associated with the treated plots. Monitoring CO₂ occurred on a monthly basis in four locations throughout Routt National Forest, Arapaho National Forest and the Colorado State Forest during the summer of 2010. At each of the locations, three cut treatment plots and a control were examined to determine soil CO₂ efflux. Infrared gas analyzers (IRGA) were used to obtain a linear efflux for every collar (n=5) within the four treatments. Abiotic factors were measured to correlate the efflux of each plot with soil moisture and temperature. Repeated measures analysis of variance (ANOVA) deciphered changes in month and treatment variables. The repeated measure ANOVA found no differences among the treatments though change was highly discernable in the time. The change over time may be more related to abiotic factors such as soil temperature. The data suggests that applying silviculture treatments will not the effect the soil CO₂ respiration.

Boff, Jessica

Perceptions of Gangs and Members of Gangs from a General Perspective

Presenters: Boff, Jessica

Undergraduate Presentation

Faculty sponsor: Phillips, Michael

Criminal Justice, Psychology, Sociology

Poster Presentation

Mt. Evans Ballroom
10:30 - 11:30 in the Morning

To measure the general perceptions of gangs and gang members, a survey was created. A total of 42 Colorado residents participated in the online survey, with an age range of 18 to 60 years, and a variety of religious beliefs. Perceptions of gangs and members included perceived knowledge about gangs, experience, and stereotypes. Results concluded that opinions and beliefs about gangs generally show a negative trend with few exceptions.

Britt, Jamie

The Decoding of Symbols within the Courtroom

Presenters: Britt, Jamie

Undergraduate Presentation

Faculty sponsor: Jones-Brown, Kenya

Communication Studies, Political Science

Poster Presentation

Mt. Evans Ballroom

10:30 - 11:30 in the Morning

The problem surrounding courtroom communication in today's practice of law is the need for systematic analysis of symbolic encoding, decoding, and interpretation of symbols instrumental to the construction of case logic. The rationale to facilitate this study is to understand the steps necessary for court personnel to assist in the process of portraying symbols successfully in order to effectively present their case to the court. The intent for this research is to decode symbols within *Roe v. Wade* placing the symbols into cluster analysis and dramatic pentad. The research will present the decoding of court transcripts and oral arguments from the petitioning side of *Roe v. Wade*. The presented symbols will answer: What is the assumptive logic undergirding the encoding and interpretation of symbols by court personnel.

Broeker, Nicholas

The Effect of Dissonant Tones on Emotion Perception: Surprise vs. Fear

Presenters: Broeker, Nicholas

Undergraduate Presentation

Faculty sponsor: Peterson, Eric

Peterson, Eric

Oral Presentation

Aspen A

11:00 - 11:15 in the Morning

In this study, we evaluated the effects of dissonant tones on the the ability of subjects to distinguish between surprise and fear. Although scientists have long understood that dissonance arouses negative emotion, the mechanisms remain poorly understood. For example, when Russian composer Igor Stravinsky in 1913 premiered his ballet, "The Rite of Spring," a highly dissonant piece for its time, people began to riot. Additionally, evidence that four-month-old infants show negative arousal to dissonance supports an inborn, universal response to dissonant tones. Some research has suggested that emotional response to dissonance reflects a shared underlying mechanism with fear-inducing alarm vocalizations. A working hypothesis is that these dissonant tones may share acoustical characteristics with vocalizations that activate the threat-detection system. This hypothetical model is consistent with neuropsychological evidence that the amygdala, an important structure in many social-cognitive processes, participates in both dissonance response and in threat detection from human voices. To test this, we looked at the effect of dissonance on face emotion perception, in particular, surprise versus fear. We implemented a reaction time (RT) paradigm in which consonant or dissonant tones were randomly presented for 1000 ms. Across the last 200 ms of this stimulus, a face depicting surprise or fear was presented. Participants were asked to identify the emotion depicted as quickly as possible (RT judgments). We hypothesized that dissonant tones would activate the threat system and predicted that this activation should induce a delay in RT or an increased error in identifying emotion (incongruent stimuli pairings). Analyses of both RT and error patterns yielded statistically significant support: RTs were significantly faster for fear judgments following dissonance relative to consonance). These results support our hypothesis that dissonance activates a threat mechanism (likely innate) that influences emotion-face perception. Future efforts will explore the relationship between these dissonant tones and the human voice, and we are currently building human threat voice stimuli to implement in this paradigm.

Broughton, Brianne

Inhibition of MCF-7 Breast Cancer Cell Proliferation by Using Snake Venom Purified Proteins: Exploring New Possibilities in Drug Development

Presenters: Broughton, Brianne

Undergraduate Presentation

Faculty sponsor: Mackessy, Stephen
Biological Sciences
Research Excellence Award Finalist

School of Biology Poster Presentation
Mt. Evans Ballroom
12:00 - 01:00 PM

Abstract: Animal venoms contain various components that may be useful for medicinal purposes, and previous research has demonstrated that some snake venom components inhibit cancer cell proliferation by both general and specific mechanisms. Paradoxically, the creatures that many people fear may carry a possible treatment for an equally feared disease, cancer. The purpose of this study is to evaluate the effects of different venoms and purified toxins on the proliferation of MCF-7 breast cancer cells. Our working hypothesis is that some venoms will inhibit cancer cell growth but show minimal effects on normal cells. Cells were cultured, subcultivated and then added to wells of a microtiter plate containing varying concentrations of rattlesnake venoms. After 24 hr incubation at 37 °C, cell proliferation in the presence and absence of venoms was quantified (MTT assay). Initial results indicate that many venoms contain potent anti-proliferative activities, but the level of potency does not correspond to overall venom toxicity (LD50). We are currently purifying several venom proteins from venoms showing high anti-proliferative activity and lower toxicity, with the goal of obtaining purified component(s) which will inhibit cancer cell proliferation but not affect normal cells. This research has the potential to discover novel compounds with specific anti-cancer properties, which in turn can assist in rational drug design.

Calhoun, Kaitlin

**Alterations in prefrontal function in a social isolation model of schizophrenia
in the mouse**

Presenters: Calhoun, Kaitlin; Erickson, Samuel; Kidd, Courtney; Leyrer, Jonna; Smith,
Alexander; Spindle, Michael
Undergraduate Presentation
Faculty sponsor: Thomas, Mark
Biological Sciences

School of Biology Poster Presentation
Mt. Evans Ballroom
12:00 - 01:00 PM

Carpine, Kelly

The Effects of Incorporating Problem Solving in the Geometry Classroom

Presenters: Carpine, Kelly

Graduate Presentation

Faculty sponsor: Powers, Robert

Educational Mathematics

Oral Presentation

Spruce B

10:20 - 10:35 in the Morning

The purpose of this study was to determine the effect of implementing problem solving tasks on students' abilities to solve problems in geometry. The study followed 7 students in my seventh period geometry class as they solved four geometry problems over a span of 8 weeks. Students were given a problem along with a rubric that explained the four parts of the problem solving process that I would use to assess their work. The four parts of the rubric were: make a plan, solve the problem, justify your reasoning, and verify the reasonableness of your solution. The tasks were graded and written feedback was given to students in the form of questions to extend their thinking about the problems. Student groups were chosen by the teacher to present their work to the class to showcase multiple solution methods used. Whole class discussions followed each presentation and were facilitated by the teacher. The study includes descriptive statistics and qualitative analysis of student work to determine the effectiveness of incorporating problem solving tasks on students' abilities to solve problems. The data show a 30% average increase in student scores from the first task to the last task. Analysis shows that students were persistent in their problem solving, making plans and revising those plans, justifying their reasoning, and many times obtaining a correct solution. Incorporating the problem solving tasks required students to think more deeply about the mathematics they were learning. A primary recommendation from this study is that geometry teachers should focus on the mathematical processes of solving problems instead of just the answer to the problem.

Chen, Cheng-Kan

Language Education for Indigenous Children: A Case Study of an Indigenous Elementary School in Taiwan

Presenters: Chen, Cheng-Kan

Graduate Presentation

Faculty sponsor: Milian, Madeline

Educational Studies, English, Foreign Languages

Oral Presentation

Spruce C

09:00 - 09:15 in the Morning

The purpose of this project is to explore the language education program implemented for indigenous children in Taiwan through a qualitative case study of an indigenous elementary school in Taiwan. My intent is to explore the implementation of Mandarin, English, and Mother Language for indigenous children with regard to curriculum design, instructional practices, language resources, language learning, and professional development through the perspectives of language teachers, administrators, and community members.

Due to the language and education policies in Taiwan in the past generations, indigenous children have lost their heritage languages and shifted to the dominant language, Mandarin. In 2001, the Ministry of Education incorporated indigenous languages into the language curriculum to preserve and revitalize the indigenous languages and cultures. Parallel to this awareness of native languages and cultures was an endeavor to internationalize the country through the promotion of English at the elementary level. Therefore, it is vital to understand how indigenous languages are being implemented, along with the required learning of the other two language subjects, English and Mandarin, in a schooling context for indigenous children. This study will be guided by the overarching research question: How is the language education program required by Taiwanese government implemented in an indigenous elementary school, as perceived by the language teachers, school administrators, and community members?

The qualitative research design in this study adopts constructionism as the epistemological approach, interpretivism as theoretical perspective, and case study as methodology. The data source of this research includes interview transcripts, observations, field notes, and documents. Some surface level themes for the findings include the dominant use of national language as the instructional language, insufficient time for indigenous language instruction, and the lack of support from family to maintain and revitalize the tribal language.

Chen, Hsin Chung

Construction of a Learning Motivation and Satisfaction Model of Physical Education College students in Taiwan

Presenters: Chen, Hsin Chung

Graduate Presentation
Faculty sponsor:
Sport & Exercise Science

Poster Presentation
Mt. Evans Ballroom
1:30-2:30 in the Afternoon

Not only are Physical education classes important recreational sports programs, but they are also critical to help build students' life-long activity patterns. Learning motivation and learning satisfaction are important concepts to understand, but in order to fully appreciate their meanings, it is necessary to examine underlying constructs of students' motives and satisfaction through their physical education experiences. These experiences can be better understood through knowing what motivates students to participate in physical education classes, how those motivations impact a satisfying experience and whether the satisfaction can influence motivations again.

The purpose of this study was to construct the reliability and validity of the Learning Motivation Scale and Learning Satisfaction Scale, and research the learning motivation and learning satisfaction model from college students in Taiwan. The questionnaire was administered by purposive sampling to 400 students. By using LISREL 8.51 and SPSS 10.0 Package Software, the obtained data was analyzed by descriptive statistic, confirmatory factor analysis (CFA), and structural equation modeling (SEM). The conclusions of this study were as follows: 1. There are five factors in learning motivation variable, which are physiological factors, psychological factors, social factors, intellectual factors and competence/mastery factors. 2. There are five factors in learning satisfaction variable, which are quality of teachers, quality of administration, programs, facilities, and social relations. 3. The model of the learning motivation and learning satisfaction in physical education fit the goodness-of-fit index.

Key words: Learning motivation, Learning Satisfaction, Confirmatory Factor Analyses, Structural Equation Modeling

Clark, Eric

**Pre-Injury Personality Style, Substance Abuse, and Social Support Effecting
Post-Injury Adaptation to Traumatic Brain Injury**

Presenters: Clark, Eric; Herbstman, David; Solanyk, Sarah

Graduate Presentation

Faculty sponsor: Ososkie, Joseph

Poster Presentation
Mt. Evans Ballroom
01:30 - 02:30 in the Afternoon

The purpose of this research review is to investigate the pre-injury factors that negatively impact post-injury adaptation to traumatic brain injury (TBI). A review of current literature was undertaken that was related to TBI, adaptation to disability, and pre-injury factors associated with maladaptive coping with disability. Substance abuse, personality style, and diminished perception of social support are identified as significant factors negatively impacting adaptation to TBI. Substance abuse can be the cause of TBI as well as have a negative impact on adaptation. Certain pre-injury personality styles among individuals with TBI have been correlated with maladaptive coping. Diminished perception of social support among individuals with TBI can impede a person's ability to successfully adapt. Identifying these factors enables rehabilitation professionals to better assist individuals with TBI who are at increased risk for maladaptive coping. Intervention strategies aimed at treatment of substance abuse, adverse personality style, and diminished perception of social support in persons with acquired TBI are recommended to promote positive adjustment by rehabilitation counselors.

Clark, Paula

Does Enhanced Risk Assessment Reduce the Rate of Rehospitalization?

Presenters: Clark, Paula

Graduate Presentation

Faculty sponsor: Hummel, Faye

Nursing

Poster Presentation
Mt. Evans Ballroom
01:30 - 02:30 in the Afternoon

The purpose of these poster presentations is to validate how the Advanced Practice Nurse (APN) can make a difference in the cost of hospitalization or other health care services by collaborating with the patient, family, physician or other individuals or agencies. Eleven cost-benefit projects were conducted by Family Nurse Practitioner students in which a procedure, healthcare practice or product was evaluated. Recommendations for potential change or modification in procedure or policy are included.

Cove, Nicole

Division I Student Athletes: The Relationship between Stress and Academic Performance

Presenters: Cove, Nicole
Undergraduate Presentation
Faculty sponsor: Moore, Mel
Sociology

Poster Presentation
Mt. Evans Ballroom
10:30 - 11:30 in the Morning

This quantitative study examines the self-reported stress and time management skills of being a Division I college athlete softball player and is going to attempt to answer the question: "How does the stress of being a Division I student athlete affect academic performance?". Additionally, how increased stress levels affect the academic performance of these female student athletes will be examined. Participants include 14 female softball players from a Division I program in the Rocky Mountain region. Participants will complete a questionnaire that consists of questions dealing primarily with, but not limited to, stress and time management, which once analyzed in SPSS for different frequencies between the multiple variables, will be used to establish a relationship/connection between stress and academic performance. The findings from this study can be used to help future student athletes cope and deal with their stress and academic performance.

Craven, Katelin

Habitat Use by Bats in Forested, Edge, and Clear-cut Ponderosa Pine Forest in Boulder County, Colorado

Presenters: Craven, Katelin
Graduate Presentation
Faculty sponsor: Adams, Rick
Biology

Oral Presentation
Aspen C
10:00 - 10:15 in the Morning

Current silviculture methods incorporate various selective harvesting techniques. We investigated how often bats were present in a mosaic treatment area that included forest, edge, and clear-cut within ponderosa pine woodlands in Boulder County, CO. We arrayed three Pettersson D240x ultrasonic detectors connected to digital recorders on tripods to record sonar passes by bats. We set up five permanent transects having detectors in each stand type (forest, edge, open) that ran from three to nine hours per night during July and August 2010. Calls were analyzed to species using Sonobat 3.0 software. Data collected over 45 detector-nights showed bat activity was highest in clear-cuts (209 total calls), with 97 total forest calls and 60 total edge calls recorded. Frequency of occurrence One-way Anova statistical test indicates significant difference among groups ($P = 0.026$). Forested areas were used predominately by the clutter specialists species *Myotis thysanodes* and *M. evotis*. *Myotis ciliolabrum* and *Lasiurus cinereus* used all habitats, whereas *M. lucifugus*, *Lasionycteris noctivagans*, and *Eptesicus fuscus* used mostly clear-cuts. One-way Anova run on percentages of species-presence-nights showed no significant differences among species ($P = 0.066$). There was an apparent relationship between lunar illumination and bat species' activity, however X² test indicates non-significant differences among groups ($P = 0.07$). Because habitat usage was diverse and may vary depending upon nightly conditions, such as moon phase, forest management is more likely to satisfy the requirements of more species if harvesting creates a mosaic of patches with different habitat characteristics.

Cucarola, Aimee

“Does solar energy make sense?”

Presenters: Cucarola, Aimee

Graduate Presentation

Faculty sponsor: Newmark, Richard

Business Administration

Oral Presentation

Aspen C

11:40 - 11:55 in the Morning

With oil prices recently topping \$100 per barrel, you may be wondering if powering a home with solar panels makes economic sense. We evaluate the economic feasibility of installing a residential solar energy system on an existing home. Our analysis includes five locations—New York City, Chicago, Denver, Phoenix, and Los Angeles—to highlight impact that latitude, local utility rates, and state and local incentives have on economic feasibility. We also analyze the impact of financing options—purchase, home-equity loan, lease, power-purchase agreement—on economic feasibility. Moreover, analysis

explicitly takes into account many variables likely to affect homeowners such as income taxes, opportunity cost of capital, increasing electricity costs, decreasing efficiency of the solar system over time, and expected maintenance costs of the system. The results of our cash-flow analysis are reported in terms of payback, net present value, and internal rate of return. We believe that our comparisons provide a benchmark for use by homeowners and/or tax advisors when considering a specific potential residential solar installation as well as providing a framework for conducting a detailed analysis of such an installation.

D'Angelo, Adrian

Urinary Tract Infection Cost Analysis

Presenters: D'Angelo, Adrian

Graduate Presentation

Faculty sponsor: Hummel, Faye

Nursing

Poster Presentation

Mt. Evans Ballroom

01:30 - 02:30 in the Afternoon

The purpose of these poster presentations is to validate how the Advanced Practice Nurse (APN) can make a difference in the cost of hospitalization or other health care services by collaborating with the patient, family, physician or other individuals or agencies. Eleven cost-benefit projects were conducted by Family Nurse Practitioner students in which a procedure, healthcare practice or product was evaluated. Recommendations for potential change or modification in procedure or policy are included.

Dale, Kelly

Attitudes Toward Disability Among Undergraduate Human Service Majors

Presenters: Adam, Lisa; Borucinski, Simone; Dale, Kelly

Graduate Presentation

Faculty sponsor: Ososkie, Joseph

Poster Presentation

Mt. Evans Ballroom

01:30 - 02:30 in the Afternoon

The purpose of this study was to investigate general attitudes toward disability among undergraduate students with helping majors. Since previous research has concentrated on divergent majors not related to human services, the rationale of this study was to examine in detail the closely related degree concentrations within this field. Specifically, this study focused on the helping related human service majors of Community Health, Gerontology, and Rehabilitation. It is hypothesized that there will not be significant differences among helping majors due to the similar nature of their human service concentrations. A general attitude toward disability scale was administered to undergraduate human service majors in a classroom setting. Analysis of variance was undertaken in order to determine within and between group differences in attitudes. Results will be reported upon data collection and statistical analysis. Future research should focus on specialties of counseling among graduate students in rehabilitation, school, and clinical counseling in order to validate helping degrees at the graduate level of study.

Dibbs, Becky-Anne

Precision taught bio-calculus: An ethnographic case study

Presenters: Christopher, Brian; Dibbs, Becky-Anne

Graduate Presentation

Faculty sponsor: Lahman, Maria

Biological Sciences, Educational Mathematics

Oral Presentation

Spruce C

11:20 - 11:35 in the Morning

In this ethnographic case study, 2 sections (n=60) of bio-calculus students participated in a study designed to explore their experience with an interdisciplinary precision taught course. The students, primarily pre-med biology majors, were randomly assigned to the two sections. Preliminary analysis of the field notes, fifteen student interviews and two instructor interviews indicated both the bio-calculus curricula and students differed qualitatively than the students in the general introductory calculus course. While students in the traditional calculus course had strong algebraic skills, students in bio-calculus were more comfortable with applying concepts, modeling data and using numerical methods. Although there were slight differences in the implementation of precision teaching between the two instructors, the students found the formative writing activities valuable and used reading sheets to search for internet tutorials, study for exams, and as an advising tool. Given the differences in how bio-calculus students approached

calculus, we recommend bio-calculus courses utilize distinct curricula from traditional calculus courses.

Dibbs, Becky-Anne

Transparent technology: Using Smartphones to interview on sensitive subjects

Presenters: Dibbs, Becky-Anne; Glassmeyer, David

Graduate Presentation

Faculty sponsor: Dibbs, Rebecca

Applied Statistics & Research Methods, Educational Mathematics

Oral Presentation

Columbine B

02:20 - 02:35 in the Afternoon

Researchers now have the capability to record and transfer conversations using innovative technology such as cellular phones allowing participants to be comfortable during an interview, but potential ethical landmines exist with consent and data security. Transparent technology (eg. refrigerator, cell phone, elevator) is accepted as part of the landscape in society and is typically not remarked upon. Framed by a study on undergraduates' experiences with repeating a course, we discuss methodological and ethical concerns relating to the use of transparent technology including Smartphones, laptops, and MP3 players as data collection instruments. After providing background on transparent technology, we briefly highlight the research we conducted, and review three potential ways of recording data transparently. We then describe the ethical decisions that cropped up because of our choices for recording data and the decisions we made. Finally, methodological considerations in the areas of cost, ease of use and ethics are discussed.

Dinges, Jay

Saif al-Islam al-Gaddafi - Ultimate Terms in Address to the Libyan People

Presenters: Dinges, Jay

Graduate Presentation

Faculty sponsor: Allen, Lin

Communication Studies

Oral Presentation

Spruce A

09:40 - 09:55 in the Morning

On the 20th of February, 2011, Saif al-Islam al-Gaddafi, son of Libyan leader Moammar Gaddafi, delivered a message to the Libyan people and the world at large in reaction to the massive protests sweeping the North African nation. This research looks at the younger Gaddafi's use of ultimate terms (God, Devil and charismatic) during his speech as outlined by theorist Richard M. Weaver. What I expect to find is a rhetorical approach that relies heavily on devil terms to paint protesters and opposition leaders as unsavory characters.

Dong, Rui

Secrets of the Jade Dragon: Sexuality and Globalization in China

Presenters: Dong, Rui

Undergraduate Presentation

Faculty sponsor: Low, Michelle

Foreign Languages, History, Interdisciplinary Studies

Oral Presentation

Aspen C

01:20 - 01:35 in the Afternoon

Globalization, a 21st century phenomena, has impacted the Chinese culture in many ways. The "hidden secret" is not something out of the ordinary but part of human nature; in Chinese culture, it's something to be put under the table, and that something is human sexuality. Through modernity, many western ideas have made their way into Chinese culture. Through the process of Globalization, the incorporation of Western ideology into Eastern cultures when dealing with human sexuality has altered the East's perception of this former taboo and created a springboard for scientific study. This paper examines the transformation of sexuality in China under the influence of globalization.

Dreier, Amy

Defining an Impact Construct Applicable to Offender Therapists: A Grounded Theory Approach

Presenters: Dreier, Amy

Graduate Presentation

Faculty sponsor: O'Halloran, Mary Sean; Wright, Stephen

Counseling Psychology

Poster Presentation
Mt. Evans Ballroom
01:30 - 02:30 in the Afternoon

The current qualitative study explores the applicability of established impact constructs, including Vicarious Trauma (Pearlman & Saakvitne, 1995), Secondary Traumatic Stress (STS; Figley, 1995), and Burnout (Maslach, 1982) to the experiences of sex offender therapists. Literature has revealed a problem in applying these constructs, which were created for application to a population of professionals who work with victims of trauma, to therapists who work with perpetrators of abuse. Research has suggested that differences in the development and maintenance of relationship may affect the applicability of victim therapist constructs to offender therapists. This review of the relevant literature helped define and refine relevant research questions. The goal of the proposed research is to define an adequately specific construct and substantive level theory to explain the impacts, both positive and negative, faced by offender therapists. Data collection and preliminary data analysis is currently underway. Data includes semi-structured interviews with offender therapists which are audio recorded and transcribed verbatim. Once interviews are transcribed, the data is analyzed using Straus and Corbin's (1998) grounded theory method. Grounded theory data analysis breaks data down through three coding stages: open coding, in which categories are developed and defined; axial coding, in which categories are related to one another through specific properties and dimensions; and selective coding, in which the researcher integrates the categories into a refined theoretical model (Straus & Corbin, 1998). I anticipate the analysis to reveal a construct grounded in the data specific to offender therapists that explains their unique experiences in working exclusively with perpetrators of sexual abuse. By revealing such a construct, these therapists can potentially mitigate negative impacts and continue their difficult yet worthwhile work.

Duggan, Lisa

Tuberculosis Skin tests versus IGRA blood tests: Saving money with a more expensive test?

Presenters: Duggan, Lisa

Graduate Presentation

Faculty sponsor: Hummel, Faye

Nursing

Poster Presentation
Mt. Evans Ballroom
01:30 - 02:30 in the Afternoon

The purpose of these poster presentations is to validate how the Advanced Practice Nurse (APN) can make a difference in the cost of hospitalization or other health care services by collaborating with the patient, family, physician or other individuals or agencies. Eleven cost-benefit projects were conducted by Family Nurse Practitioner students in which a procedure, healthcare practice or product was evaluated. Recommendations for potential change or modification in procedure or policy are included.

Duran, Gena

The Power of Name: An I.A Richards Approach of Semantic Theory

Presenters: Duran, Gena

Graduate Presentation

Faculty sponsor: Allen, Lin

Communication Studies

Oral Presentation

Spruce A

03:00 - 03:15 in the Afternoon

The central purpose is to consider I.A Richards' rhetorical theory of Semantic Theory to the power of name by illustrating the three components of symbol, reference and referent. The central purpose is to consider how self identity and the power of name to a human being such as myself is affected. Personally I have struggled with the name I was given at birth and through storytelling and reflection I will demonstrate the power of name. In addition, this think piece considers name change such as celebrities and how name brings to life a persona that best fits an individual. Included there is discussion about nicknames and an American tradition of naming our children immediately after birth. This paper also provides a thought provoking essence to which we should all consider how profoundly powerful a name has to individuals.

Durnen, Janell

Spend a Little Save a Lot: Beating the Rising Costs of Methicillin-Resistant Staphylococcus Aureus (MRSA)

Presenters: Durnen, Janell

Graduate Presentation

Faculty sponsor: Hummel, Faye
Nursing

Poster Presentation
Mt. Evans Ballroom
01:30 - 02:30 in the Afternoon

The purpose of these poster presentations is to validate how the Advanced Practice Nurse (APN) can make a difference in the cost of hospitalization or other health care services by collaborating with the patient, family, physician or other individuals or agencies. Eleven cost-benefit projects were conducted by Family Nurse Practitioner students in which a procedure, healthcare practice or product was evaluated. Recommendations for potential change or modification in procedure or policy are included.

Ehrlich, Megan

Assessing the Availability and Acceptability of Healthy Children's Menu Choices in Sit-Down Restaurants

Presenters: Ehrlich, Megan
Undergraduate Presentation
Faculty sponsor: Clark, Alena
Dietetics

Research Excellence Award Finalist

Oral Presentation
Council Room
10:20 - 10:35 in the Morning

Americans aged eight and older eat out approximately four times per week. Because of the availability of restaurant food to children, a three part exploratory study including a parent survey, group discussion with restaurant managers and evaluation of restaurant children's menus was conducted. Parents (n=105) were given a valid and reliable questionnaire to assess knowledge, attitudes and behaviors in relationship to eating out with their children. Ninety-four percent felt restaurants should offer more healthy choices on children's menus. Parents who had completed training/education after high school were more likely to feel that they were good role models on healthy eating for their children ($\chi^2=11.9$; $p<.05$); however, Parents who felt that they were knowledgeable in eating healthy were more likely to not answer the knowledge questions correctly on the survey ($\chi^2=117.4$; $p<.05$). The majority (68%) of parents would like to have a website available with information on how to make healthy choices at restaurants. A group discussion (n=4) was held

to gain restaurant managers' views on offering healthy menu choices for children. Overall, managers felt that children's menus did not offer healthy choices. Their concerns for offering healthy food choices included cost and customer demand. In addition, they did not feel that having nutritional information available on their menus would dissuade people from ordering food, but the cost of producing this information was a concern. Restaurants' children's menus (n=71) were evaluated using a valid tool. Thirty-five percent offered a healthy entrée choice, 48% offered a healthy side option and 13% offered either skim or 1% milk. The results of this study will allow for the development of educational tools to assist not only parents but restaurant managers on ways to choose and provide healthy food choices on children's menus.

Ellis, Jessica

**Effective Literacy Instruction for Young English Language Learners:
Components of the Ideal Learning Environment**

Presenters: Ellis, Jessica

Undergraduate Presentation

Faculty sponsor: Guccione, Lindsey

Interdisciplinary Studies

Research Excellence Award Finalist

Oral Presentation

Council Room

02:20 - 02:35 in the Afternoon

In order for any educational process to be successful, it is crucial that instruction provided to students is a direct reflection upon the knowledge and abilities with which they enter the classroom as well as that which they are expected to obtain before exiting. One subpopulation of students for which the most effective educational methods are being investigated is that of English language learners (ELLs). This research project will focus on literacy instruction for ELLs in grades K-3. A brief overview of the increasing presence of ELLs in our schools today and the impact these changes in demographics have had on classroom instruction – specifically in regards to language and literacy – will be presented. Through a review of several instructional approaches utilized both previously and presently in US schools to teach English to ELLs, the most effective programs will be analyzed in-depth in order to gain a deeper understanding of their success. From this information, the strongest individual program components will then be compiled into an “ideal learning environment.” Each element will be discussed in detail with reasoning for its necessity as well as suggested methods of implementation into the “real world”

classroom. Through this exploration of individual components, a foundation for the most effective literacy instruction for young ELLs will be created. Following this investigative process, concrete examples, including lesson plans in a variety of content areas, classroom management techniques, and detailed descriptions of both the learning environment and student-teacher interactions will be presented. This combination of research and application will serve as a resource for teachers who aim to provide effective and balanced literacy instruction to young ELLs.

Elmont, Katie

Social Attachments among At-Risk Adolescents

Presenters: Elmont, Katie

Undergraduate Presentation

Faculty sponsor: Houser, Jeffrey

Sociology

Poster Presentation

Mt. Evans Ballroom

01:30 - 02:30 in the Afternoon

This study tested the hypothesis that juvenile delinquents have a stronger attachment toward their peers compared to their attachment toward their parents. Juvenile delinquency rates have increased over the years. And through research and self-report studies discussing perceived self, peer relationships, parental relationships and educational attachment, it can be seen that juvenile delinquents have a stronger relationship toward their peers and feel more attached than they do towards their parents. Many juveniles in the Department of Human Services custody felt that they could better relate to their peers and felt that their peers had a positive attitude toward them. These same juveniles also felt that they got into disagreements often about whom their friends are and could not go to their friends for help.

Endres, Kellsie

Game On! Experiential, Place-Based Education Meets Leadership Development: Senior Capstone Class Creates Video Game for Freshmen Leadership Students

Presenters: Ellis, Jessica; Dilldine, Clarissa; Endres, Kellsie; Gosch, Daniel; Grove, Elizabeth; Morfitt, Sara; Wills, Holly

Graduate and Undergraduate Presentation Presentation

Faculty sponsor: Rohloff, Catherine

Poster Presentation
Mt. Evans Ballroom
10:30 - 11:30 in the Morning

This project has been created by members of the capstone class of the President's Leadership Program. It begins with a brief description of place-based education and highlights the potential application of this method of learning while building a community around the university. We created this project using Augmented Reality for Interactive Storytelling (ARIS) to customize our own place-based learning experience for the campus community. ARIS is an interactive tool which allows users to make mobile games, tours and stories. ARIS players experience a virtual world of complex characters, items and media placed in physical space. Our game throws the player into an enticing adventure of mistaken identities, competing interests, and intrigue. We created a fictional story which guides the player through a series of twisted events on the UNC campus intertwined with controversial issues surrounding water rights in Colorado. The player must apply critical thinking, active learning, and exploration in order to investigate the disappearance of a fictional university professor. The player virtually solves the mystery while physically touring the UNC campus. This method allows students to actively participate in the game while becoming familiar with the campus and surrounding community. In order to conduct this project, we researched the impact of place-based education as well as learned to use ARIS and create a connection between the two. It is our hopes that this interactive tool will be used in the future to enhance the experience of prospective UNC students.

Escobar-Fredericks, Melissa

“Los efectos del franquismo en la literatura española”

Presenters: Escobar-Fredericks, Melissa

Undergraduate Presentation

Faculty sponsor: Garza, Efrain

Hispanic Studies

Oral Presentation
Aspen B
10:20 - 10:35 in the Morning

El régimen de Franco, el llamado “franquismo” estableció una severa censura sobre todos los medios de comunicación y practicó una fuerte e

intolerante represión a toda expresión individual y especialmente cualquier comentario social no aprobado por el régimen, a cualquier regionalismo local y a toda obra literaria española no escrita en español. Algunos sugieren que la censura franquista tenía una doble función: la de prohibición y la de autorización. Con esta censura el gobierno podía controlar al mismo tiempo que evitar cualquier escape de información prohibida. Es evidente que estos sucesos afectaron a la literatura de esa época, pero también restringieron la consulta y utilización de varias obras literarias que ya existían, y además de eso llegó a afectar a muchos escritores de esa época y por extensión a la toda creación literaria que surgió durante y después de la época franquista. Aunque la historia literaria de España ha sido permanentemente alterada de manera negativa por la dictadura del generalísimo Francisco Franco, ésta se ha ido renovando y evolucionando a través de los años.

Eulenstein, Mark

Daucus carota callus growth: A developmental analysis

Presenters: Eulenstein, Mark

Undergraduate Presentation

Faculty sponsor: Keenan, Susan

Biological Sciences

Poster Presentation

Mt. Evans Ballroom

12:00-1:00 in the Afternoon

In 2008, an estimated 2 to 3 million cases of malaria occurred worldwide resulting in over one million deaths. Unfortunately the majority of the deaths are children in sub-Saharan Africa making malaria the number one infectious killer of children in the world. Due to the remote locations of the majority of the affected areas, a traditional vaccine would be difficult to implement because of cost, compliance, refrigeration and the need for administration by trained personnel. Edible vaccines are a way to immunize humans through food products. The goal of this study is to develop a transgenic carrot that once ingested provides the immune response necessary to fight off malaria. Carrot calli are immature carrot tissue fragments consisting of undifferentiated cells (which are similar to human stem cells) and are crucial for the success of this project. Healthy carrot calli are needed to provide the optimal settings for plant transformation so that the malaria antigens can be incorporated. In order to keep these carrots healthy, optimal growth settings and hormone concentrations within the media must be determined. In this study carrot callus initiation hormone (2,4-Dichlorophenoxyacetic Acid or (2,4 -D) , carrot shoot development hormone (6-Furfurylaminopurine or kinetin), and sucrose

will be expressed at differing concentrations within controlled conditions, such as temperature and light. The changes in growth rates will be observed over several weeks. The hope is to formulate the optimal media combination necessary for the development of healthy carrot calli which are capable of genetic modification in order to generate the foundation of an edible vaccine to fight malaria.

Fawcett, Alicia

A Social Insight in Comparing and Contrasting Current Measures for Gender Equality

Presenters: Fawcett, Alicia
Undergraduate Presentation

Faculty sponsor:
Anthropology, Economics, Political Science

Oral Presentation
Aspen C

03:00 - 03:15 in the Afternoon

Gender equality is becoming an increasingly important issue on political gender in local and nation's levels. Current gender measurements such as the Human Development Index (HDI), the Gender Development Index (GDI), the Gender Empowerment Measurement (GEM), and the Women's Empowerment Matrix (WEM) do not measure gender inequality. His paper compares and contrasts current measurements and offers a new solution. Neo-classical economic measurements and Amayta Sen's theory of individual 'opportunity' do not represent gender inequality. By using Greek methods of facta, logic, metaphor, and story we can propose a new Rhetorical measurement. This measurement, the Rhetorical Gender Measurement will focus on both mathematical and social aspects of human behavior. It will also include historical and socio-economic models which use anthropologists as micro-level evaluators. An adaptation of new measurements and improvement of old methods can lead to better policy making decision which allow women to maintain a state of wellbeing and allow greater access to the economic market.

Forbes, Lisa

Between a Rock and Hard Place: Successful Transitions Among Multiple Roles

Presenters: Black, Linda
Fac/Staff Presentation

Faculty sponsor: Black, Linda
Counselor Education

Poster Presentation
Mt. Evans Ballroom
01:30 - 02:30 in the Afternoon

Transitioning from undergraduate to graduate studies presents challenges, role strain, and role confusion for many students. This poster presentation presents an overview of current research on the factors and implications of role/profession/personal transitions and the imposter phenomena as experience by elite athletes and high achieve student-scholars. Recommendations for addressing these concerns are offered.

Franklin, Elizabeth

Developing Multicultural Curriculum to Teach K-12 Bilingual Students about Immigration, Migration, and Diaspora: Part A

Presenters: Grooms, Ashley; Gurule, Sara; Orange, Andrea; Wisner, Kathryn
Undergraduate and Faculty Presentation Presentation

Faculty sponsor: Franklin, Elizabeth

Oral Presentation
Spruce A
10:00 - 11:15 in the Morning

In this double panel presentation, eight undergraduate panels (four will present in the first session and four in the second session), working on their ESL or bilingual endorsements, will present aspects of multicultural curriculum that they developed for teaching bilingual K-12 students about immigration, migration and/or Diaspora communities. The following topics will be addressed in these presentations: the Great Migration and the Inuits, the Spanish Immigration to the Southwest, the Trail of Tears, the Oregon Trail, the Immigrant Journey to America and Ellis Island, and the Bracero Movement and Migrant Farm Workers. The panelists will give a brief theoretical overview about the importance of teaching multicultural curriculum to K-12 bilingual students in context of learning language. They will then demonstrate how and why their selection of English and Spanish print and Internet materials appropriately teaches this content. The presenters will also illustrate with examples strategies they developed for teaching academic vocabulary, grammatical structures, and comprehension in the context of multicultural curriculum. Finally, the panelists will demonstrate writing assignments and other projects they developed to help their K-12 bilingual students develop a

critical stance as well as a socio-historical perspective on immigration and migration.

French, Jamie

Tyrannizing Images of Egypt

Presenters: French, Jamie

Graduate Presentation

Faculty sponsor: Allen, Lin

Communication Studies

Oral Presentation

Spruce C

03:40 - 03:55 in the Afternoon

Weaver describes tyrannizing images as an authority at the center of a culture. He saw this image as the authority of which helps create, break down, or familiarize a culture as itself. With the recent events in Egypt, they have seen a new culture created with a short period of time. As democracy starts to change the country to a different society, the question remains what can be related as the tyrannizing image of the new face of the country? In this essay I argue that Facebook is that image of change, empowerment, and democracy. Not only do I argue that Facebook is that image for the citizens of Egypt, but also how the government officials of Egypt viewed that same image. Analyzing how something people use every day for socializing was used by the Egyptian people as a means of a new culture and way of life.

Fuller, Levi

An Analysis of Job Satisfaction in the Workplace

Presenters: Fuller, Levi

Undergraduate Presentation

Faculty sponsor: Clinebell, Sharon

Business Administration

Oral Presentation

Spruce A

02:00 - 02:15 in the Afternoon

This presentation will review the issues surrounding job satisfaction. In particular, how Google facilitates job satisfaction for its employees will be discussed.

Garcia, Jena

The Cinematic Representation on the U.S.-Mexico Border

Presenters: Garcia, Jena; Herrera, Dulce; Moreno, Velia; Rascon, Leticia

Undergraduate Presentation

Faculty sponsor: Park, Jungwon

Spanish

Oral Presentation

Spruce A

09:20 - 09:35 in the Morning

By introducing a crime scene related to drug-trafficking, the film "Touch of Evil" directed by Orson Welles (1958) shows us an origin of chaos, state of exception and strong prejudice on the U.S-Mexican border. These papers focused on the analysis of the way of representation of this border show contemporary interpretations of this classic movie. The papers will be presented in Spanish.

Garcia, Jeremy

Positive Extensions of Matrices Indexed by a Homogeneous Tree

Presenters: Garcia, Jeremy

Undergraduate Presentation

Faculty sponsor: Soto-Johnson, Hortensia

Mathematics

Oral Presentation

Columbine B

01:00 - 01:15 in the Afternoon

A homogeneous tree, T , of order q is an acyclic, undirected, connected graph such that every node belongs to exactly $q + 1$ edges. Let T_n denote the maximal subgraph of T with the property that the distance between any two nodes of T_n does not exceed n and let $A = [a_{t,s}]_{t,s \in T_n}$ be a square positive

definite matrix indexed by the nodes of T_n . The matrix A is said to be isotropic if $a_{t,s}$ depends only on the distance between the nodes t and s . The positive extension problem for the matrix A consists in finding all such isotropic positive definite matrices B indexed by the nodes of $T_{n+1} \supset T_n$ such that the diagonal block of B corresponding to T_n coincides with A .

This talk shall discuss a recursive solution of the positive extension problem formulated above. The talk is based on joint work with D. Volok.

Glendenning, Andrew

Improving Healthy Fresh Food Access in Weld County Through the Development of a Year- Round Farmers' Market

Presenters: Glendenning, Andrew

Graduate Presentation

Faculty sponsor: Givray, Deborah

Public Health

Oral Presentation

Spruce C

10:00 - 10:35 in the Morning

The primary methodology of current obesity prevention programs is to target lifestyle changes through education, while often ignoring issues related to the role food access plays in determining a person's health. Neighborhoods and communities that have limited access to affordable and nutritious foods are known as "food deserts." Food deserts are a public health concern due to the strong association between food selection and diet-related diseases correlated to obesity. Those living in low income or rural areas are particularly at-risk in a food desert because of the difficulty to obtain healthy fresh foods without significant travel or economic expense. By building upon recommendations from the Centers for Disease Control (CDC) and the United States Department of Agriculture (USDA), a year-round farmer's market project was designed to increase healthy and affordable food access for people in the Weld County underserved food desert of Milliken, CO. Milliken is a town of 6,200 residents in the southwestern part of Weld County. Currently, 45% of residents are Hispanic or Latino and 69% of households earn \$50,000 or less a year. The project framework includes: creating a local task force to drive program development, surveying Milliken residents to determine food purchasing and consumption habits, developing a market start-up operating blueprint specific to community needs, and assisting the Town of Milliken with full market implementation and long term sustainability. The initial outcome of this project is to increase the proportion of Milliken residents who have access to healthy and affordable foods. The longer term individual outcome is to increase consumption of all healthy foods by Milliken residents. The desired population-based impact is to

increase by 10% Milliken resident's consumption of fruits and vegetables which will be measured with community health surveys.

Glendenning, Andrew

Improving Healthy Fresh Food Access in Weld County Through the Development of a Year- Round Farmers' Market

Presenters: Glendenning, Andrew

Graduate Presentation

Faculty sponsor: Givray, Deborah

Public Health

Poster Presentation

Mt. Evans Ballroom

10:30 - 11:30 in the Morning

The primary methodology of current obesity prevention programs is to target lifestyle changes through education, while often ignoring issues related to the role food access plays in determining a person's health. Neighborhoods and communities that have limited access to affordable and nutritious foods are known as "food deserts." Food deserts are a public health concern due to the strong association between food selection and diet-related diseases correlated to obesity. Those living in low income or rural areas are particularly at-risk in a food desert because of the difficulty to obtain healthy fresh foods without significant travel or economic expense. By building upon recommendations from the Centers for Disease Control (CDC) and the United States Department of Agriculture (USDA), a year-round farmer's market project was designed to increase healthy and affordable food access for people in the Weld County underserved food desert of Milliken, CO. Milliken is a town of 6,200 residents in the southwestern part of Weld County. Currently, 45% of residents are Hispanic or Latino and 69% of households earn \$50,000 or less a year. The project framework includes: creating a local task force to drive program development, surveying Milliken residents to determine food purchasing and consumption habits, developing a market start-up operating blueprint specific to community needs, and assisting the Town of Milliken with full market implementation and long term sustainability. The initial outcome of this project is to increase the proportion of Milliken residents who have access to healthy and affordable foods. The longer term individual outcome is to increase consumption of all healthy foods by Milliken residents. The desired population-based impact is to

increase by 10% Milliken resident's consumption of fruits and vegetables which will be measured with community health surveys.

Goss, Melissa

Discourse Variation between Online Mathematics Sections

Presenters: Goss, Melissa; Glassmeyer, David

Graduate Presentation

Faculty sponsor: Powers, Robert

Educational Mathematics

Oral Presentation

Columbine B

09:20 - 09:35 in the Morning

The demand for high-quality teacher education has universities turning towards online education to provide teachers access to higher education. New mathematics teaching strategies are being implemented, such as problem based learning, that rely heavily on discourse for teacher learning. This could be problematic because communication and community is harder to establish and maintain in online environments. We examined the discourse in two sections of an online mathematics modeling course; qualitative observations indicated a stronger discourse in one section over the other. In an effort to measure these differences we categorized class time and coded student responses and questions based on mathematical criteria, administered Rovai's (2002b)

Greufe, Stephanie

The Effect of Cancer Stage on Physiological and Psychological Parameters

Following Supervised Exercise Training

Presenters: Greufe, Stephanie

Graduate Presentation

Faculty sponsor: Schneider, Carole

Sport & Exercise Science

Research Excellence Award Finalist

Oral Presentation

Council Room

01:00 - 01:15 in the Afternoon

Cancer treatments lead to a variety of adverse physiological and psychological effects. Effects which may be attenuated with exercise training, however, minimal research has been conducted to understand what effect cancer stage has on the protective effect of exercise. **PURPOSE:** To examine the effect cancer stage has on pre-exercise training physiological and psychological parameters, as well as, absolute change with exercise training. **METHODS:** Participants were grouped according to their cancer stage, stage 1 (n=69), stage 2 (n=69), stage 3 (n=41), and stage 4 (n=21). Participants completed a medical evaluation and upon approval by a medical physician, an assessment was conducted to measure baseline data. A three-month individualized supervised exercise intervention was implemented. The subjects were assessed a second time following the exercise intervention. The assessment consisted of measurement of the participant's cardiovascular endurance, pulmonary function, level of depression, fatigue, and quality of life. Confidence intervals were used to determine significance between cancer stages in both pre/post data as well as absolute change following exercise intervention. A family alpha level of 0.10 was used to determine significance. **RESULTS:** Stage 1 showed significant improvements in FEV (6.2 [1.9, 10.4]), treadmill time (1.2 [0.1, 2.3]), and VO₂max (3.5 [1.6, 5.5]). Stage 2 significantly improved in FEV (5.6 [1.3, 9.8]), treadmill time (1.4 [0.3, 2.5]), VO₂max (4.0 [2.1, 5.9]), fatigue (-1.8 [-3.2, -0.5]), and level of depression (-2.6 [-4.6, -0.6]). Treadmill time (1.8 [0.6, 3.1]), VO₂max (4.4 [2.2, 6.6]), fatigue (-1.7 [-3.2, -0.1]), and level of depression (-4.1 [-6.4, -1.7]) significantly improved following exercise intervention for participants in stage 3. Stage 4 showed significant improvements in treadmill time (2.1 [0.6, 3.6]) and VO₂max (6.9 [4.2, 9.5]). **CONCLUSION:** Although stage is not a predictor of exercise response. Exercise provides a protecting effect across all parameters across all stages.

Gross, Ashley

Endosulfan as a potential animal model for Parkinson's Disease

Presenters: Gross, Ashley; Peverley, Laura; Pummer, Joseph

Undergraduate Presentation

Faculty sponsor: Thomas, Mark

Biological Sciences

School of Biology Poster Presentation

Mt. Evans Ballroom

12:00 - 01:00 PM

Hanson, Rachelle

Fire Dynamics in the Qinling Mountains, China

Presenters: Hanson, Rachelle

Undergraduate Presentation

Faculty sponsor: Franklin, Scott

Biological Sciences

School of Biology Poster Presentation

Mt. Evans Ballroom

12:00 - 01:00 PM

The strong link between habitat and animals throughout the world has driven the recent push of all conservation groups to manage habitat in hopes to save rare species. The link is especially strong for the giant panda, as 90% of their diet consists of various bamboo species. This study seeks to develop a historical knowledge of past bamboo dominance in the Qinling Mountains, China through charcoal and phytolith analysis. It is currently assumed fire is a rare event in these mountains. Soil samples were collected in elevational zones dominated by *Bashania fargesii* (lower elevations) and *Fargesia qinlingensis* species. Water flotation and standard protocol were used to extract the charcoal content. Charcoal extracted from 50 soil samples was separated into three size classes to help interpret adjacency of fire occurrences: 0-0.5 mm, >0.5-2.0 mm, and >2.0 mm. Greater frequency of charcoal particles and larger particle sizes suggest that fires were more common at lower elevations. Results indicate that fire has overall been extensive in the recent past and periodically important historically.

Haugland, Regina

Interpersonal Sensitivity and Body Image across Gender

Presenters: Haugland, Regina

Undergraduate Presentation

Faculty sponsor: O'Halloran, Sean

Clinical Counseling, Psychology

Research Excellence Award Finalist

Oral Presentation

Council Room

10:40 - 10:55 in the Morning

Body image is the multifaceted cognitions and emotions we have regarding our appearance. Individuals with a positive body image (i.e. a positive regard

for their appearance) are often protected from developing disordered eating (Cooley & Toray, 2001), depression and other psychological problems (McFarland and Kaminski, 2009). How body image develops is not currently understood. Recent studies suggest that interpersonal sensitivity, the excessive awareness of the thoughts and feelings of others about oneself, may be correlated to body image (Atlas, 2004; McFarland & Kaminski, 2009). However, none of these studies have investigated the possible moderator affect gender has on this relationship. For this study, 63 female and 29 male college students completed body image and interpersonal sensitivity questionnaires. Preliminary analysis shows that body image is negatively correlated to interpersonal sensitivity. Thus individuals who have higher levels of interpersonal sensitivity often have poorer perceptions of their bodies. It is hypothesized that females will have a stronger correlation between body image and interpersonal sensitivity; previous research has found that women have higher levels of interpersonal sensitivity (Hall & Schmidt-Mast, 2008) and lower body image (Cash, Winstead & Janda, 1986). This study is intended to provide a framework to inspire future research on the origins and causes of body image.

Havard, Cody

Exploring the Effects of Conference Expansion and Realignment on Fans of Rival College Athletic Programs

Presenters: Eddy, Terence; Havard, Cody

Graduate Presentation

Faculty sponsor: Gray, Dianna

Sport & Exercise Science

Poster Presentation

Mt. Evans Ballroom

01:30 - 02:30 in the Afternoon

The landscape of college athletics was altered in the summer of 2010 when the Big Ten added the University of Nebraska and the Pac 10 added the University of Colorado from the Big 12 Conference. The expansion not only affected the Big 12 Conference, but many long-standing competitive rivalries as well, one being between the Nebraska Cornhuskers and the Colorado Buffaloes. Further, the two schools were members of the Big 7 Conference, and have developed relationships with other intra-league teams over the past century. Therefore, it seems reasonable to suggest that the departure of the two schools to different conferences will change the nature of their competitive relationship. The purpose of the current study was to qualitatively investigate

fan reactions to the recent conference expansion and the effects on the two universities athletic programs.

Fans of the University of Colorado and the University of Nebraska were interviewed about their feelings regarding the long-standing annual contests between the schools and other institutions within the Big 12 Conference coming to an end. Results from this study will bridge a gap in the sport literature on rivalry, while also informing athletic administrators of how conference realignment can affect fan perspectives.

Havard, Cody

General Fan Perceptions of Rival Teams in Intercollegiate Athletics

Presenters: Havard, Cody

Graduate Presentation

Faculty sponsor: Gray, Dianna

Sport & Exercise Science

Poster Presentation

Mt. Evans Ballroom

10:30 - 11:30 in the Morning

Rivalry in sport is the topic of general conversation on an almost daily basis. It is difficult to turn on the television and not see or hear something about a sport rivalry. At the collegiate level, rivalries exist on many levels and vary from team to team and conference to conference. With the number of times that the word rivalry is used to describe competition between two teams in sport, it would be expected that a plethora of research addressing the phenomenon would exist. This is not the case however. Prior research has used rivalry as a variable to help explain consumer behavior (Davies, Veloutsou, & Costa, 2006; Hilman, Cuthbert, Bradley, & Lang, 2004; Luellen & Wann, 2010; Mahony & Moorman, 1999; Sierra, Taute, & Heiser, 2010; Spaaij, 2008; Wann, Haynes, McLean, & Pullen, 2003; Wann et al, 2006), but currently no research has been conducted to investigate what constitutes a rivalry. Therefore, the purpose of the current study is to develop and test an instrument for reliability and validity that will help to explain the factors underlying the construct of rivalry in sport.

Findings from the current study will provide academics and practitioners with a measure that can be used to provide applicable and relevant information addressing rivalry in sport. For academics, the development of a scale to measure rivalry in sport will help guide future investigation into the phenomenon. Practitioners will benefit from the development of such a scale in that they will be better able to prepare for contests involving rival teams and

use the on-field/on-court success and failure of a rival team to better market the favorite team.

Herrington, Brittany

Influence of Grandparents on First-Generation College Students

Presenters: Herrington, Brittany

Undergraduate Presentation

Faculty sponsor: Chase, Sarah

Educational Studies

Poster Presentation

Mt. Evans Ballroom

10:30 - 11:30 in the Morning

Abstract: This qualitative research study explores the relationship of grandparents as a source of knowledge, support and advice for first-generation college students' decision to pursue higher education. Grandparents can have a positive influence on first-generation college students through emotional support and guidance through the student's educational career. This study will explore students' perceptions of how they interact with their grandparents for major decisions like pursuing higher education and achieving life goals. Although research has been conducted on first-generation college students there is minimal research on grandparents' involvement. Data will be collected through semi-structured interviews with five to seven participants. Participants will be asked questions regarding their relationship with their grandparent(s). Interviews will be transcribed and coded for themes.

Hess, Courtney

An Analysis of Cultural Impact on Organizations

Presenters: Hess, Courtney; Larson, Emmett; Stovall, Sean

Undergraduate Presentation

Faculty sponsor: Clinebell, Sharon

Business Administration

Oral Presentation

Spruce B

02:40 - 03:15 in the Afternoon

This presentation will review the impact culture has on organizations. Crayola will be used as an example of how culture has impacted a particular organization.

Higgins, Hillary

Mexican American Family Literacy and The Success of The Family To Learn to Read, Speak, and Write In English

Presenters: Higgins, Hillary

Graduate Presentation

Faculty sponsor: Moore, Mel

Sociology

Oral Presentation

Spruce C

11:40 - 11:55 in the Morning

The fastest growing minority population in the United States is the Latino population, specifically Mexican American immigrants. First generation Mexican American immigrants have low graduation rates and underdeveloped literacy skills compared to second and third generations of Mexican Americans immigrants. This project offers a community-based solution to improve literacy rates among this population. Specifically, this research shows that it is pivotal to cultivate a relationship between the students, their families, the community, and the school. Past research has shown the importance of maternal literacy and maternal interest in speaking, reading and writing in English. Therefore, the Family Literacy Program proposed here emphasizes the importance of maternal involvement in enriching the child's English literacy skills as a way to bridge the educational gap between first-generation Mexican American immigrants and their counterparts.

Hooks, Toni

Human Sex Differences in Frequency of Using Modern Technology to Access Erotica

Presenters: Hooks, Toni

Undergraduate Presentation

Faculty sponsor: Dunn, Thomas

Poster Presentation
Mt. Evans Ballroom
10:30 - 11:30 in the Morning

Recently, research on gender differences has been commonplace with typical topics being differences in sexual arousal (Fisher et. al.1986), use and opinions of erotica (Attwood, 2005 and access of modern technology (Hasan, 2010). Despite this rich literature, there is a gap regarding the combination of the three. In this quantitative study, a survey addressing the use of modern technology (Internet, etc) to access erotica. Surveys will be distributed 50 college age men and women. From its analysis I hope to test my hypothesis that there are human sex differences in the frequency of accessing sexually arousing stimuli when using modern technology.

Howerton, Kayla

Youth Recreational Firearm User's Shooting Habits, Use of Hearing Protection Devices and Self-Assessed Auditory Status

Presenters: Howerton, Kayla
Undergraduate Presentation

Faculty sponsor: Meinke, Deanna
Audiology & speech-language sciences
Research Excellence Award Finalist

Poster Presentation
Mt. Evans Ballroom
01:30 - 02:30 in the Afternoon

Youth hunters 6 to 15 years of age are estimated to number 1.6 million (U.S. Fish & Wildlife Service, 2006) and the National Sports Shooting Foundation (NSSF, 2009) reports that there are 30.06 million active sports shooters (hunters, cowboy shooters, etc.) over age seven in the United States. The peak sound pressure levels of recreational firearms frequently exceed the recommended exposure limit of 140 dB peak sound pressure level (SPL) for adults (NIOSH, 1998; OSHA, 1983) and the 120 dB peak SPL limit advised by the World Health Organization (WHO) (1999) for children. Consequently, recreational firearm shooters and nearby bystanders are at risk of noise-induced hearing loss (NIHL) and tinnitus if hearing protection devices are not utilized.

Little is known about the recreational shooting habits of youth. This research

study interviewed 86 youth shooters, between the ages of 10 and 18 years, regarding their recreational firearm use, hearing loss prevention knowledge and habits, as well as their self-assessed auditory status. Youth begin using firearms at a very early age; 19.7% taking their first shot by age 5 and 56% by age 8. Hearing protective devices (earplugs/earmuffs) are reportedly used “all the time” by 66% of participants while target shooting and only 24% of the time while hunting. Tinnitus is an early indicator for NIHL, 15% of youth reported constant tinnitus and 49% notice tinnitus occurs or worsens after shooting. This research highlights the need for early education and intervention efforts to minimize the risk of NIHL in youth.

Hubbard, Ashley

Determining evolutionary diversification and the phylogenetic placement of Lotus subgenus Syrmatium

Presenters: Hubbard, Ashley

Undergraduate Presentation

Faculty sponsor: McGlaughlin, Mitchell

Biological Sciences

School of Biology Poster Presentation

Mt. Evans Ballroom

12:00 - 01:00 PM

Species taxonomic placement is essential to understanding how individuals and populations are related. Taxonomic analyses are important to understanding diversity, management practices, as well as evolutionary diversification. In this project I am examining the evolutionary relationship within Lotus subgenus Syrmatium, a group that contains 11 species with distinct morphological, ecological, and geographic characteristics. I am surveying nuclear ribosomal DNA (nrDNA) and the chloroplast genome using DNA sequencing to gain insight into variation within populations, species, and geographic regions. Data from the internal transcribed spacer (ITS) region of ribosomal DNA allows for phylogenetic variation examination at the species level because it has a high degree of variation and is bi-parentally inherited. In contrast, chloroplast DNA is generally inherited from the seed producing parent as a single copy, meaning that it undergoes very slow evolution. By comparing the chloroplast genome with the nuclear genome we are able to examine the patterns of change and variation within each. Examining the patterns of diversity we will be able to understand phylogenetic placement and evolutionary change within the taxa. Lotus taxa can be used to provide insight to speciation events and how the evolutionary units contained within this group can be used with appropriate conservation activities necessary to maintain diversity.

Hughes, Timothy

The Relationship Between Economic Growth and Population Distribution in Colorado

Presenters: Hughes, Timothy

Undergraduate Presentation

Faculty sponsor: Diggs, David

Geography

Poster Presentation

Mt. Evans Ballroom

10:30 - 11:30 in the Morning

The movement of people and capital can change the economy in any region. An area gaining people can also gain investments to the community and produce the jobs necessary to support a growing population. Conversely, an area that loses people may lose this economic benefit. The 1980's and 1990's were years of dynamic change in Colorado's economic landscape. The movement of people into, out of, and within the state was also adding complexity to these dynamic changes. Some of the economic changes included, but are not limited to, booms (and associated busts) in the energy and tourist industry, and a varying demand for local resources such as coal and molybdenum. This study intends to test the hypothesis that population growth or decline was directly associated with economic growth or decline and that growth of population and the economy is always a positive force. The study tracks over time, the increase and decrease in measures of wealth during this dynamic time. A regional comparison was conducted to find the similarities and differences between the flow of people and the flow of measures of wealth. Regions used in this research were the Front Range, the Mountains, the Western Slope, the Plains and the San Luis Valley. Measures of wealth used include average income level, education level, and unemployment rate. Population data was attained from the 1980, 1990 and 2000 census. Particular attention was given to locales that did not follow the trends displayed in the surrounding areas or at the national level. Early findings suggest that economic boom and bust cycles ran their course, bloating and depleting the coffers of many municipalities, businesses and individuals.

Infante, Michel

**Integrating the Best of Both Worlds/Integrando lo Mejor de Ambos Mundos:
Influences on the Adjustment Process of Mexican-origin College Students**

Presenters: Infante, Michel
Undergraduate Presentation
Faculty sponsor: Nelscon, Kyle
Sociology

Oral Presentation
Aspen A
11:20 - 11:35 in the Morning

What influences the adjustment of Mexican-origin adolescents into the mainstream U.S. culture? Previous research on migration has identified three categories of adjustment: assimilation, acculturation, and biculturalism. Using a mixed method approach, this study observes students' different cultural experiences and explores how Mexican-origin students manage to adjust or accommodate in the mainstream U.S. culture. This study examines the adjustment process of Mexican-origin students to determine which category of adjustment they experienced, and what factors influenced this process. 20 Mexican-origin students attending a predominantly white university in the West completed an in-depth survey with open-ended questions regarding their adjustment experiences and views on cultural belonging. Results from the survey reveal evidence that a bicultural adjustment experience is ideal for Mexican-origin adolescents. In addition, respondents reported that friends (both Mexican and American), teachers, parents, counselors, mentors, tutors, and educational institutions were important influences that helped facilitate their adjustment.

James, Stephanie

**Maporal hantavirus Infection of Syrian Golden Hamsters Causes Immune Gene
Induction in the Spleens, but not Lungs**

Presenters: James, Stephanie
Graduate Presentation
Faculty sponsor: Schountz, Tony
Biological Sciences

Oral Presentation
Columbine A
03:20 - 03:35 in the Afternoon

Sin Nombre virus (SNV) was first identified in 1993 in the Four Corners region of North America as an etiologic agent of Hantavirus cardiopulmonary syndrome (HCPS). HCPS is an emerging infectious disease. Infection is associated with high levels of inflammatory cytokine staining in human pulmonary autopsy specimens, suggesting HCPS is an immunopathology. The reservoir of SNV is the deer mouse (*Peromyscus maniculatus*), which develops persistent infection without pathology. Humans infected with SNV develop flu like symptoms including fever and myalgia, and rapidly progress into respiratory distress and shock. The mortality rate of humans infected with SNV is 36%. Immunohistochemical staining of lung and spleen tissues from infected individuals has been suggestive of an immune mediated disease that causes massive capillary leakage and pulmonary edema. Efforts to study immune responses to SNV have been slowed due to a lack of an animal model. Recently, the Syrian golden hamster (*Mesocricetus auratus*) has been used as an HCPS model with Maporal virus (MAPV). Hamsters display similar gross pathology when infected with MAPV to humans with SNV. This study evaluated the expression of immune cytokine genes during infection. Surprisingly, there were few significant changes in gene expression in the individual organs. However, a difference in immune response between lungs and spleens was observed.

James, Stephanie

POTENTIAL THERAPEUTIC USE OF TRANSFORMING GROWTH FACTOR- β FOR TREATMENT OF HANTAVIRUS CARDIOPULMONARY SYNDROME.

Presenters: James, Stephanie

Graduate Presentation

Faculty sponsor: Schountz, Tony

Biological Sciences

Research Excellence Award Finalist

Oral Presentation

Council Room

02:00 - 02:15 in the Afternoon

Sin Nombre virus (SNV) was first identified in 1993 in the Four Corners region of North America as an etiologic agent of hantavirus cardiopulmonary syndrome (HCPS). HCPS is an emerging human infectious disease. Infection is associated with high levels of inflammatory cytokine staining in human pulmonary autopsy specimens, suggesting HCPS is an immunopathology. The reservoir of SNV is the deer mouse (*Peromyscus maniculatus*), which develops persistent infection without pathology. Experimental infections of deer mice suggest a role for transforming growth factor beta-1 (TGF β 1) in limiting pathology. The Syrian golden hamster (*Mesocricetus auratus*) has been used as

an HCPS model with Maporal virus (MAPV). We have examined the potential use of TGF β 1 as a therapeutic agent in this model. Hamsters infected with MAPV and treated with TGF β 1 had decreased lung congestion and pleural fluid, although no significant attenuation of disease was observed. Significant differences in gene expression between uninfected control animals and infected animals were observed. However, treatment with TGF β 1 did not significantly alter cytokine gene expression, although less hyperplasia was noted in lungs of treated animals.

Johnson, Joe

A Sociological Look into On-Campus Religious Organizations

Presenters: Johnson, Joe

Undergraduate Presentation

Faculty sponsor: Houser, Jeffrey

Sociology

Poster Presentation

Mt. Evans Ballroom

01:30 - 02:30 in the Afternoon

On the UNC campus alone there are 110 registered clubs, and of these, ten are for religious purpose. Eight of these are Christian; one is Judaism, and one Pagan. My goal is to survey students on campus to find out their reasons for or against joining a club and finding the stigmas that they may have against on-campus religious organizations. Thru this survey I will distinguish if the appeal of these clubs differs amongst religions, gender, major, and students graduating class. The impact of living on campus compared to those who live off-campus, and the age of the student may also have an impact on reason for participation. This information will be beneficial to the university, the student and the club organizations. The university will gain knowledge of religious groups that may need to be added, club organizations will benefit from knowing the stigma that being religious on campus may bring and ultimately it will help the student find an organization that they can belong too. By identifying the social stigma created by all religious organizations on campus we can justify the need for these clubs to continue on campus.

Jordan, Christina

Reducing Healthcare costs in the hospital

Presenters: Jordan, Christina
Graduate Presentation
Faculty sponsor: Hummel, Faye
Nursing

Poster Presentation
Mt. Evans Ballroom
01:30 - 02:30 in the Afternoon

The purpose of these poster presentations is to validate how the Advanced Practice Nurse (APN) can make a difference in the cost of hospitalization or other health care services by collaborating with the patient, family, physician or other individuals or agencies. Eleven cost-benefit projects were conducted by Family Nurse Practitioner students in which a procedure, healthcare practice or product was evaluated. Recommendations for potential change or modification in procedure or policy are included.

Juarez, Norma

Community Engagement and Internship Projects

Presenters: Carter, Sean; Claudio, Jacob; Infante, Michel; Juarez, Norma; Rae, Zachary; Ruesgen, Ashley
Undergraduate Presentation
Faculty sponsor: Falcon, Priscilla
Mexican American Studies

Oral Presentation
Spruce B
11:00 - 11:15 in the Morning

In this presentation students will describe their internship experiences with various community service agencies in the Northern Colorado area. Specifically students will address issues of diversity.

Kanoff, Kristen

Effects of Traumatic Brain Injury (TBI) on Cognitive Control Processes

Presenters: Kanoff, Kristen
Undergraduate Presentation
Faculty sponsor: Bashore, Theodore
Psychology

Research Excellence Award Finalist

Poster Presentation
Mt. Evans Ballroom
10:30 - 11:30 in the Morning

This behavioral study aims to characterize the effects of traumatic brain injury (TBI) on the ability to accurately and efficiently make response selections in the presence of conflicting information. Deficits in this area of executive cognitive control may have devastating effects on everyday functioning. This study utilizes the Simon task, a choice-reaction time paradigm, in an attempt to measure subjects' ability to control impulsive behaviors. Delta plots will be constructed to determine response selection and conditional accuracy functions will be plotted to determine strength of response capture. The primary hypothesis under investigation states that subjects with a history of TBI will show deficits in the ability to suppress the selection of an incorrect response when compared to healthy control participants. It is also hypothesized that TBI participants who demonstrate a greater deficit in inhibitory control will rate higher on an impulsivity scale. Ratings will be obtained from the Barrat's Impulsiveness Scale, a self-report questionnaire. The results of this study may be important for the development, implementation, and monitoring of the effectiveness of cognitive rehabilitation strategies following traumatic head injuries.

Kaufeld, Kimberly

A Bayesian approach to classroom quiz data.

Presenters: Kaufeld, Kimberly

Graduate Presentation

Faculty sponsor: Kaufeld, Kimberly

Applied Statistics & Research Methods

Oral Presentation
Spruce B
01:20 - 01:35 in the Afternoon

The purpose of this study is to use previous online quiz data and in class quiz data to predict future performance. A Bayesian analysis approach will be used predict future online quiz scores from STAT 150 students and compare the results to in class quiz data.

Kennedy, Matthew

Reforming the One-Child Policy

Presenters: Kennedy, Matthew

Undergraduate Presentation

Faculty sponsor: Low, Michelle

Economics, Interdisciplinary Studies, Political Science, Public Health

Oral Presentation

Aspen B

01:00 - 01:15 in the Afternoon

When China first began the One-Child Family policy in 1979, it's politics, society, and economy were very different. The One-Child Family policy was the only logical option at the time to try and reduce the population and lower the birthrate. Though it has been a very effective policy, Chinese citizens are upset about being forced to only have one child. Now, in the year 2010, China is a very different place, and the One-Child Family Policy has created some new, unwanted problems. One of the larger problems is the gender gap. Studies have shown that in places where there is economic stability, increasing female literacy lowers the birthrate. Now that China has become one of the world's largest economic players, it could take advantage of it and change the One-Child Family Policy to a Two-Child Policy, and have a large campaign to encourage female literacy within the country. Using an econometric OLS regression the study measures to see how much GDP/capita, female literacy, and the percentage of unskilled labor in a country affect the birthrate. The results show that these are all significant factors that could be altered to lower the birthrate in China while allowing the One-Child Family Policy to become a Two-Child Family Policy. This, in turn, could help to correct the high gender imbalance.

Kimmell, Joseph

How Job Design Contributes to a Motivating Work Setting

Presenters: Kimmell, Joseph; Stephens, Ravi

Undergraduate Presentation

Faculty sponsor: Clinebell, Sharon

Business

Oral Presentation

Spruce B

03:40 - 03:55 in the Afternoon

This presentation will review the principles of good job design and how it contributes to a work setting that is intrinsically motivating. Google will be used as an example of an organization in which job design is used as a motivational tool.

Kincaid, Tyler

Analysis of Transitional House Length of Stay Using Generalized Estimating Equations

Presenters: Kincaid, Tyler

Graduate Presentation

Faculty sponsor: Lalonde, Trent

Applied Statistics & Research Methods, Public Health, Social Science

Poster Presentation

Mt. Evans Ballroom

10:30 - 11:30 in the Morning

The homeless population in the United States has seen a dramatic change in the last three decades with an increase in women, children, and families all living without nightly shelter (National Coalition for the Homeless, 2009). The changing dynamic of the homeless population has increased pressure on the public health of communities and the social service networks that aim to provide adequate services to vulnerable populations with an increased risk of mental, physical, emotional, and health related problems (Aday, 2001). The Greeley Transitional House works to provide emergency and extended housing to homeless families of at least one adult caring for at least one dependent child, helping minimize the public health risks to the community.

An important consideration in managing the Greeley Transitional House is the typical occupant length of stay. In addressing this concern, this paper presents a number of Poisson log-linear models (Agresti, 1996) using the number of days in an individual's length of stay as the response. These models are used to assess the impact on length of stay of such individual characteristics as gender, age, size of family, education, and reason for entering the transitional house. The models are also used to assess the impact of such individual treatments as case management hours and job training. To account for some individuals who participate in the Greeley Transitional House multiple times, these models are extended using Generalized Estimating Equations (Zeger and Liang, 1986) to account for the autocorrelation inherent in repeated observation of individuals.

King, Matthew

Disturbance Effects on Ponderosa Pine Understory Flora

Presenters: King, Matthew

Undergraduate Presentation

Faculty sponsor: Franklin, Scott

Biological Sciences

School of Biology Poster Presentation

Mt. Evans Ballroom

12:00 - 01:00 PM

Thinning followed by mastication has become a common and cost-effective means for fuel reduction and restoration of open ponderosa pine forest, but mastication effects on the understory are still unknown. This study examined the spatial structure of fuels, soil and vegetation at Heil Valley Ranch in areas masticated and compared it to a control area and two other management techniques: thinning and fire (prescribed burn). The objectives were to determine to what extent mastication alters forest floor vegetation composition and diversity. Data were collected from a stratified random placement of 1m² plots in each treatment type. Vegetation cover was collected from each plot. Diversity within the fire site was much greater than that within the mastication site. Overall cover was also lower in the mastication site when compared to fire (>100% - due to abundance of species and overlap in shade cover), but similar with overall cover in thinning and control sites (<50% total cover). Furthermore vegetation and diversity was different among sites based on ordination analyses indicating compositionally different understories. Species indicator analyses were also performed and showed the fire site had the highest number of indicating species distinguishing it from other treatments. The control site was not as clearly discriminated and had only weak indicators. Species richness was also found to be greatest at the fire site, followed by mastication, thinning, and control and for all other diversity indices, fire>thinning>mastication>control. Growth form cover appeared to be increased by disturbance. Fire had the greatest cover for all growth forms, especially forbs and graminoids and was the only site where bryophytes were found in plots. Forbs dominated all other treatment sites. Both exotic and native cover were higher in the thinned and mastication site compared to the control, but the fire site had the highest cover of both. Relative to the control site, fire sites had much greater native cover. Mastication did impact vegetation cover and diversity, but was certainly more similar to the thinning and controls sites than the fire site. Fire may be an additional component to increase native species and diversity on sites that are thinned.

Kiwimagi, Katherine

Simulations of resonance properties in mouse prefrontal neurons

Presenters: Kiwimagi, Katherine

Undergraduate Presentation

Faculty sponsor: Thomas, Mark

Biological Sciences

School of Biology Poster Presentation

Mt. Evans Ballroom

12:00 - 01:00 PM

Kopetzky, Benjamin

Angkor: Rise and Fall

Presenters: Kopetzky, Benjamin

Undergraduate Presentation

Faculty sponsor: Fong, Adam

History

Oral Presentation

Spruce C

03:20 - 03:35 in the Afternoon

Early Southeast Asia civilizations are an area of mystery for the world, largely due to a lack of written sources. However in these nations we have found the ruins of different extinct nations, each helping to tell the tale so long lost to history. One of these lost nations was the great Khmer Empire, located in Cambodia. The Khmer Empire was an extremely powerful and important nation during the early periods of Southeast Asia history. The Khmer Empire was able to last well over 600 years and establish a strong cultural tie with the Cambodian people as well as many of the people in the surrounding countries. Its capital city was that of Angkor, a marvelous capital with great temples and intricate wall carvings. Angkor itself was a marvel of ancient engineering and architecture; the largest pre-industrial city in the world with its influence stretching far across the map. Its large stretching mandala affected not only Cambodia but many of the surrounding countries such as Thailand and Laos. This nation is responsible for many of the traditions and the spread of religious ideas throughout mainland Southeast Asia.

Kraver, Jeraldine R.

This I Believe About Teaching and Learning

Presenters: Kraver, Jeraldine R., Allison, Cristyn; Von Feldt, Joshua; Kirk, Loura; Horsch, Megan; Reed, Shannon; Fritz, Kyle; Kraver, Jeraldine; Conard, Karissa; Coon, Brandon; Butler, Thomas; Newman, Michelle; Heesacker, Rachel; Grande, Elizabeth; Morgan, Robbie; Tripp, Ashlee; Hall, Matthew; Seader, Sherry; Hyde, Jessica; Paulus, Mathes; Ehlke, Angela; Goodwin, Elizabeth; Willson, Christine; Koons, Melissa; Huck, Ryan; Norris, Emily; Hofbauer, Mikaela; Bushner, Sheila; Ladtkow, Amy; Pierce, James

Fac/Staff Presentation

Faculty sponsor: Kraver, Jeraldine R.

Poster Presentation

Mt. Evans Ballroom

10:30 - 11:30 in the Morning

Following the model of the "This I Believe" my students craft brief statements about their notions of teaching and learning. Last year my students delivered these orally on Research Day. This year we hope to combine oral presentations and posters (students can choose which approach they prefer). This I Believe statements are between 3-5 minutes. The posters will address current issues in education. I will have a better sense of how many students will speak and how many make posters right after Spring Break? We would like to present in the morning session. We could use a podium. We don't need a stage.

Lancaster, Tracey

Multilevel Selection and its Effect on the Evolution of Homo Neandertalensis

Presenters: Lancaster, Tracey

Undergraduate Presentation

Faculty sponsor: Wanner, James

Anthropology

Oral Presentation

Aspen B

02:40 - 02:55 in the Afternoon

In this paper, I use a model created by E. O. Wilson and David Sloan Wilson (2008) to examine how multilevel selection may have affected the evolution of Homo neandertalensis (Neandertals). Multilevel selection theory is the theory that natural selection can occur in multiple levels of the biological hierarchy. This model has been used to determine the extent to which multilevel selection

has affected certain animal species; however, it has never been applied to a hominid species to date. By synthesizing this research by Wilson and Wilson and genetic studies by Green et al. (2010) revealing that Neandertals and modern humans interbred in the Middle East about 80,000 years ago, I show how multilevel selection may have affected Neandertal evolution. Further, I argue that group level selection may not have had as drastic an affect on Neandertal evolution as it did on modern human populations. I conclude by recommending ways in which this model may be applied to other species in the human evolutionary tree in order to create a complete picture of the extent to which multilevel selection has affected hominids through time.

Landram, Suzy

An Understanding of Overfitting in Regression

Presenters: Landram, Suzy

Graduate Presentation

Faculty sponsor: Lalonde, Trent

Applied Statistics & Research Methods

Poster Presentation

Mt. Evans Ballroom

01:30 - 02:30 in the Afternoon

Overfitting occurs when a multicollinear or unrelated variable enters the regression model. In addition to causing (a) unstable and therefore misleading interpretation of regression coefficients and (b) partial t tests to show insignificance, overfitting is also harmful to out-of-sample predictions. Harmful is defined as biased point predictions and inflated interval predictions. Both harmful effects are indicated in Mallows Cp statistic. The authors derive two measures that compliment Mallows Cp. The prediction variance index (PVI) measures the inflation in prediction variances and therefore inflation in its prediction intervals. The coefficient of prediction (P2p) measures the accuracy of point predictions. These measures are derived and discussed below. Hence, the objective of this paper is to strengthen ones computational understanding of how overfitting is harmful to point and interval predictions. This paper has important implications in applied research concerning the adequacy of traditional modeling criteria and why out-of-sample prediction accuracy favors parsimonious models.

Keywords: overspecified models, prediction variances, model selection, PRESS, parsimonious models

Langston, Randall

Making Meaning of Student Success in Undergraduate Education: Perspectives of Faculty

Presenters: Langston, Randall; Steward, David; Mildrexler, Janella; Romero de la Torre, Aldo

Graduate Presentation

Faculty sponsor: Guido, Flo

Higher Education & Student Affairs Leadership

Research Excellence Award Finalist

Poster Presentation

Mt. Evans Ballroom

01:30 - 02:30 in the Afternoon

Past research has demonstrated that student success has been determined by various quantitative factors including student persistence, degree completion, advising, test scores, and student characteristics, to name a few. Student success in this study is defined as those positive attitudes and behaviors students demonstrate in a classroom setting to obtain class credit. The purpose of this qualitative constructivist study is to understand how University of Northern Colorado (UNC) faculty make meaning of undergraduate student success. Through the utilization of open-ended, semi-structured interviews and focus group data collection procedures, we seek to learn more about faculty perspective regarding their interpretations of student success in their classrooms.

Lee, Benjamin

Cloning of Antibody cDNAs from the Jamaican Fruit Eating Bat (*Artibeus jamaicensis*)

Presenters: Lee, Benjamin

Undergraduate Presentation

Faculty sponsor: Schountz, Tony

Biological Sciences

School of Biology Poster Presentation

Mt. Evans Ballroom

12:00 - 01:00 PM

Bats have recently been identified as reservoirs of infectious agents that cause disease in humans, including SARS, Ebola and Marburg hemorrhagic fevers, and Nipah virus encephalitis. Very little research has been done on how bats host these viruses without pathology. We have established a colony of Neotropical Jamaican fruit bats (*Artibeus jamaicensis*), which host Tacaribe virus, as a model for bat-borne viruses. Previous work from our lab suggested that some Neotropical bats only have a single gene for IgG. This project will examine Ig mRNAs for evidence of additional IgG, IgA, and IgM genes by employing 5' rapid amplification of cDNA ends (RACE) to clone the variable regions of these immunoglobulin heavy chains. This strategy will allow us to identify segments where immunoglobulin genes substantially differ between classes. It should also reveal variable, diversity and joining regions that contribute to the generation of diversity of immunoglobulins. This should clarify the immunoglobulin genetics of Neotropical bats and allow us to further explore how the immune response engages Tacaribe virus.

Lee, Kang

Augmented Reality in Learning and Training

Presenters: Lee, Kang

Graduate Presentation

Faculty sponsor: Ku, Heng-Yu

Educational Technology

Research Excellence Award Finalist

Oral Presentation

Council Room

02:40 - 02:55 in the Afternoon

There are many different ways for people to be educated or be trained in regards to specific information and skills individuals are interested in or need. These methods include a classroom lecture with textbooks as a traditional way, computers, handheld devices, and other electronic appliances. Moreover, choosing learning innovations is totally dependent on both individuals' surroundings, such as where they live and what they have, and the infrastructure environments of the community in which they live. Especially in this rapidly changing society in which there is a great deal of knowledge and information, to adopt and apply information and knowledge at the right time and right place is most needed due to time and cost efficiency in both school and business settings. In this aspect, so as to not only think more about time- and cost-efficient ways for learning and training but also present inspiring ideas about applicable fields of AR in training, this literature review research paper contains the meaning of Augmented Reality (AR), how it works in learning and

training, the current position of AR in learning, and the impacts on the future of education.

Leyva-Esquivel, Jose

Emerging U.S-Mexico Border Cultures

Presenters: Carter, Sean; Leyva-Esquivel, Jose; Rae, Zachary

Undergraduate Presentation

Faculty sponsor: Park, Jungwon

Spanish

Oral Presentation

Spruce A

01:00 - 01:15 in the Afternoon

In this panel, we will present new artistic and cultures expressions that have been emerging in the U.S.-Mexico border, especially associated with the intensification of globalization. They includes "corridos," films and new local narratives. The papers will be presented in Spanish.

Leyva, José Miguel

"La hechicería y el amor ilícito en La Celestina"

Presenters: Leyva, José Miguel

Undergraduate Presentation

Faculty sponsor: Garza, Efrain

Hispanic Studies

Oral Presentation

Aspen B

09:20 - 09:35 in the Morning

El primer modelo literario que muestra una reflexión dirigida hacia la vida más apegada a la realidad es la tragicomedia. El conflicto entre las clases sociales y el desborde de los vicios de la sociedad en La Celestina se expone con toda su magnitud en esta época de transición entre la Edad Media y el Renacimiento. Entre los temas recurrentes que Fernando de Rojas aborda en La Celestina destacan la hechicería y el amor ilícito. Además, la implicación de personajes de diversos estratos sociales unidos por un solo problema los une incondicionalmente. El conflicto entre las diferencias en las clases sociales no desaparece mientras la obsesión sexual, la codicia y la inmoralidad sigan siendo

la prioridad en la existencia de personajes que ciegos por la lujuria o la ambición llevan a los protagonistas a un final no deseado. El desmoronamiento de Melibea y la muerte trágica de Calixto por gozar de su indecoroso amor muestran sus consecuencias fatales. Esto pone en evidencia que recurrir a medios malsanos como los hechizos para conseguir un amor imposible reciben el castigo que merecen según los cánones y creencias religiosas de la época.

Lin, Feng-Chen

Early Identification and Intervention for Infant and Toddlers with Autism Spectrum Disorder

Presenters: Lin, Feng-Chen; Andrade, Supattra

Graduate Presentation

Faculty sponsor: Banerjee, Rashida

Special Education

Research Excellence Award Finalist

Poster Presentation

Mt. Evans Ballroom

01:30 - 02:30 in the Afternoon

Autism spectrum disorder (ASD) is a group of developmental disabilities characterized by atypical development in socialization, communication, and behavior. It typically is apparent before age 3 years, with associated impairments affecting multiple areas of a person's life. Providing intensive early intervention is critical to maximizing outcomes for children with autism spectrum disorder (ASD), and evidence suggests that the earlier intervention can begin, the better the outcome. The purpose of this presentation is to review the social communication characteristics of very young children with ASD, which have important implications for early identification. The current evidence-based intervention practices for children with ASD are summarized in this article. In conclusion, special emphasis is placed on focused intervention practices and comprehensive treatment models appropriate for infants and toddlers with ASD, as well as issues affecting the delivery of effective early intervention services to children and their families.

Lin, Feng-Chen

Following the At-Risk Dollars: How Colorado Funding Formula Denies At-Risk Students Sufficient Intervention Money

Presenters: Andrade, Supattra; Every, James; Himlie, Abby; Lin, Feng-Chen

Graduate Presentation
Faculty sponsor: Weiler, Spencer
Educational Leadership

Poster Presentation
Mt. Evans Ballroom
01:30 - 02:30 in the Afternoon

Under the current state funding dollars designated to help schools close the achievement gap between at-risk learners and the rest of the student population are not reaching their designed target. Instead, an alarming percentage of these dollars end up supplementing the learning opportunities of students who are not classified as at-risk. The purpose of this presentation is to highlight this oversight in Colorado's funding formula by examining its affects on the school districts in Colorado. The outcome is that the current funding formula creates an unfair advantage for charter schools at the expense of at-risk students. These dollars are following overall student percentages and charter schools receive more than their fair share of the at-risk funds. The error in the funding formula is particularly concerning when examining the diversity of charter schools when compare to sponsoring school districts.

Lin, Feng-Chen

The Effectiveness of Different Early Intervention for Young Children with Challenging Behavior

Presenters: Lin, Feng-Chen

Graduate Presentation

Faculty sponsor: Banerjee, Rashida

Special Education

Poster Presentation
Mt. Evans Ballroom
01:30 - 02:30 in the Afternoon

This presentation emphasizes on demonstrating the research-based outcomes of different ABA approach, 'Lovaas' interventions, verbal behavior (VB) approach and the Complete application of behavior analysis to schools (CABAS) approach. These three ABA approaches presented their own benefits for children with challenging behavior. However, intervention research is not yet available to predict which specific intervention approaches or strategies work best with which children with challenging behavior. No one approach is equally effective for all children, and not all children in outcome studies have

benefited to the same degree. The further research direction is suggested to compare evidence-based behavioral intervention researches that give the best prediction of the effectiveness of early intervention for children with challenging behavior.

Long, Azhia

An Analysis of Black Students' Journeys and Attitudes at a Predominantly White Institution

Presenters: Long, Azhia

Undergraduate Presentation

Faculty sponsor: Junne, George,
Africana Studies

Poster Presentation

Mt. Evans Ballroom

10:30 - 11:30 in the Morning

Abstract: Previous research indicates that black students attending Predominantly White Institutions (PWI) face challenges that can alter positive Black Racial Identity Development (BRID). Much research conducted on BRID has used Black students attending PWIs as its core participants; this includes the works of William E. Cross which are still used by researchers to define the characteristics of a healthy BRID. Previous researchers have neglected to capture the personal experiences of these students, and instead rely solely on surveys and samples to highlight the students' common encounters. This study will explore how Black students react to these encounters. Six undergraduate African American students at a PWI will be interviewed and their responses will be analyzed using the Nigrescence Model produced by William E. Cross. This research aims to aid in the implementation of more culturally sensitive programming, which will aid positive development.

Lowe, Elizabeth

Detecting response bias using the Test of Memory Malingering and the D-KEFS Tower Test

Presenters: Lowe, Elizabeth

Undergraduate Presentation

Faculty sponsor: Dunn, Thomas
Psychology

Oral Presentation
Aspen B
01:20 - 01:35 in the Afternoon

Neuropsychological tools are used to gain more accurate insight about an individual's level of functioning (cognitive, behavioral, executive, etc.), and to make more exact diagnoses; therefore, valid neuropsychological tools are necessary for precise evaluation. Valid neuropsychological assessment relies upon the individual putting forth maximum effort during testing. While the literature is rich when describing methods of detecting incomplete effort, it is sparse when identifying instruments resistant to such response bias. The goal of this study was to determine whether or not effort affects performance on the D-KEFS Tower Test by comparing the results with the Test of Memory Malingering (a neuropsychological assessment designed to measure effort). Thirty-nine neurologically intact college students from a medium sized Rocky Mountain university introductory subject pool were asked to participate. The participants in the experimental group were given a vignette explaining that they had been in a car accident. The participants were then asked to pretend that they had suffered a brain injury and were having memory problems. The participants in the control group were asked to do their best. A blind examiner administered the D-KEFS Tower Test and The Test of Memory Malingering (TOMM) to both groups. Data analysis shows that there was a significant difference between the two groups' performance on the TOMM, but no significant difference between the scores on the Tower Test. These results suggest that the D-KEFS Tower Test is relatively resilient to incomplete effort.

Luthye, Mandy

How Mass Consumption Affected the Political Campaigns of John F. Kennedy and Richard Nixon and the Outcome of the 1960 Presidential Election

Presenters: Luthye, Mandy

Undergraduate Presentation

Faculty sponsor: Haberman, Aaron

History

Poster Presentation
Mt. Evans Ballroom
10:30 - 11:30 in the Morning

Mass consumption has been a part of American history for many centuries and has impacted the American economy and social status of individual Americans. Few researchers have studied the impact of mass consumption on

American politics. The purpose of my research is to explore and discover how much of an effect mass consumption has made on American politics. Mass consumption shaped the political campaigns of John F. Kennedy and Richard Nixon and the 1960 presidential election between these two candidates. The analysis of presidential debates, campaign advertisements and speeches from these political events will lead to a greater understanding of how mass consumption has played a leading role in the politics of 1960. Reviewing history from an angle that is not common will pave a path for other researches to investigate the topic of mass consumption and politics throughout different time eras of American history.

Lynch, Erin

Contemporary Authors on China's Digital Frontier: Voices of China's Youth

Presenters: Lynch, Erin

Undergraduate Presentation

Faculty sponsor: Low, Michelle

Foreign Languages, Interdisciplinary Studies

Oral Presentation

Aspen C

01:40 - 01:55 in the Afternoon

This paper examines the literature produced by young Chinese authors within the past decade. As China undergoes rapid social transformations and unprecedented economic growth, young people are increasingly adrift in this new age of instant communication. Han Han and Guo Jingming are two authors that encapsulate the voice of China's post-reform generation. By examining their literature, this paper reveals the challenges facing young people in 21st century China, which in turn illuminates the effects of Globalization on a personal level.

Mascarenas, Penelope

God and Devil Terms in Newspaper Coverage of the Windsor Tornado

Presenters: Mascarenas, Penelope

Graduate Presentation

Faculty sponsor: Allen, Lin

Communication Studies

Poster Presentation

Mt. Evans Ballroom
10:30 - 11:30 in the Morning

The tornado that shredded Windsor, Colorado in May of 2008 was a life changing event for those who were there that day. It was truly traumatic, and the recovery process was long and arduous. People have described that day as full of “excitement” (Left in the aftermath, 2008, p. A2) and “a lot more uplifting that you might think” (England, 2009, p. A39). The word choices that people make to describe the experience of a natural disaster have a great impact on the essence of the media coverage of such an event. Some articles portray an event such as a tornado as tragic, frightful, and unforgettable. Other reporters might focus on the feelings of victims being lucky, hopeful, or stunned. I chose to examine the newspaper coverage of the Windsor Tornado of 2008 and analyze God and Devil terms in the writers’ portrayals of the disaster.

Certainly, reporters often use colorful, strong language to capture the reader’s attention and ensure a future following. Headlines and bylines seem to be an art unto themselves, as the words are carefully chosen specifically to draw an audience and make people want to know what is in the body of the article. But in response to big news that will naturally capture public attention, reporters continue to use strong language to create imagery within the body of the article to convey emotion, sympathy, and camaraderie. The articles following the tornado of 2008 are no exception, and I found multiple examples of Weaver’s God and Devil terms both in the reporters’ writing and the narratives of people who experienced the tornado that day.

McCurley, Karen

The Bronte Sisters and Victorian Feminism

Presenters: Birdsall, Mary; Lindstadt, Abigail; McCahan, Johanna; McCurley, Karen;
Walbeck, Diane

Graduate Presentation

Faculty sponsor: Varner, Leo
English

Oral Presentation

Spruce B

09:00 - 09:55 in the Morning

This panel discusses the Bronte sisters and Victorian feminism. The question of what intelligent and motivated young women were to do in life besides get married was debated by Victorians and portrayed in literature. The Bronte sisters engaged in this controversy in their novels, and it was

represented in the poetry of Christina Rossetti as well as the fiction of Le Fanu. This nineteenth century debate forms the foundation of modern feminism.

McDonald, Erin

African Art History in the Secondary Educational Setting

Presenters: McDonald, Erin

Undergraduate Presentation

Faculty sponsor: Coronel, Chip

Art & Design, History

Poster Presentation

Mt. Evans Ballroom

10:30 - 11:30 in the Morning

This research focuses on the importance of multiculturalism education with a focus on African Art History in the secondary curriculum. Society is quickly growing into a global community, and to prepare students for this transitional period, educators must implement multicultural identities into their curriculum. New courses, like art history, offers educators new opportunities to address new cultures. As modern communities become intertwined, it is important for students to understand this development by exploring a culture's past and present histories. My thesis includes a brief background of the African community and its modern connections to the global culture. This research takes this global identity and breaks it down into topics of African society. This will then be divided into sections followed by a few relevant lesson plans that connect with the Colorado Standards and be useful in an art history and history classroom. The global community calls for diversity in topics within American curriculum, and this research seeks to prove African Art History's relevancy within this concept. Future curriculum development will stem from this research of African Art History as a building foundation to help promote further research on other cultures and their own implementation into the Secondary Educational curriculum.

McGee, Micah

Rockies' Fans' Perceptions of Game Valuation

Presenters: McGee, Micah; Schmitt, Craig

Graduate Presentation

Faculty sponsor: Gray, Dianna

Sport & Exercise Science

Poster Presentation
Mt. Evans Ballroom
01:30 - 02:30 in the Afternoon

The need for a more efficient profit maximizing strategy is driving many Major League Baseball (MLB) teams to experiment with non-traditional ticket pricing. In 1998, the Colorado Rockies became the first team in MLB to utilize a form of variable ticket pricing (Beech, 2002). MLB teams have remained hesitant to employ modified strategies of variable ticket pricing (VTP) despite evidence of successful implementation by several teams including the Colorado Rockies (Rascher et. al., 2007).

The implementation of a pricing strategy must consider the perceptions of consumers. While sparse research exists on fans' perception of the product when implementing a VTP method in sport, research in other industries can provide some insight into this topic (e.g., Colbert et al., 1998; Drake & Dahl, 2003; Raghubir & Corfman, 1999). Studies in other non-sport industries suggest care must be taken as to not diminish brand value or satisfaction of season ticket holders. However, these non-sport studies suggest there is a reason to believe variable ticket pricing can be accepted by consumers of sport. Prior to the implementation of VTP, sport industry professionals must consider the protection of season ticket holder loyalty, the reaction of more casual fans, the difficulty in preseason opponent valuation, and the reliance on multiple revenue streams.

The current study seeks to discover if differences in perceptions of game value exist between fans of the Colorado Rockies and the Colorado Rockies organization. The study is currently in the data collection process. A survey will be disseminated to Colorado Rockies' fans via email and Facebook. The final results of this study will provide practical information regarding the fans' perceptions of game value as well as contribute to the limited literature regarding VTP in MLB.

McSwain, Jenna

The Jenkins Orphanage Bands of Charleston, South Carolina

Presenters: McSwain, Jenna

Graduate Presentation

Faculty sponsor: White, Jim

Africana Studies, Educational Leadership, Music Education, Music, Sociology

Research Excellence Award Finalist

Oral Presentation
Council Room

11:00 - 11:15 in the Morning

Jabbo Smith, one of the great trumpet players of early jazz once asserted, “Martin Luther King was all right, but brother D.J. Jenkins was the man.” In 1891 Reverend Daniel Joseph Jenkins of Charleston, South Carolina founded the city’s first orphanage for African American children. One of the various programs at his orphanage was a brass band that served to both strengthen the lungs of the orphans, a major concern in that age of tuberculosis, and teach them a valuable trade. The band was very successful, traveling through the United States and to England to perform and raise funds that would help with the cost of maintaining the orphanage. Many of the alumni of these bands went on to enjoy successful careers in jazz, playing in prominent ensembles such as those of Duke Ellington, Count Basie and Lionel Hampton. Interviews with several of these musicians reveal the rigorous musical training they received at the orphanage: they were taught to sightread music fluently, to play many or all of the instruments in the band, to play in a wide variety of styles, and especially—given the necessity of collecting funds for the orphanage, to entertain and appeal to their audience. When they achieved a high level of musicality, they were taken on demanding concert tours. Personal accounts and period journals attest to the rhythmic intensity of the bands’ performances, and the eminent jazz pianists James P. Johnson and Willie “The Lion” Smith both attested to the Jenkins bands’ influence on the nationwide 1920s dance craze, the Charleston. Although Jenkins and the orphanage bands are little remembered now, they played a significant role in the development of jazz music and in the history of music and dance in the United States, and have much to teach about effective music pedagogy.

Mendoza, Andrea

Severity and Duration of Post Traumatic Stress Disorder

Presenters: Ama, Ezinne; Filipe, Diane; Mendoza, Andrea; Nixon, Shari; Szumilas, Laura

Graduate Presentation

Faculty sponsor: Ososkie, Joseph

Poster Presentation

Mt. Evans Ballroom

01:30 - 02:30 in the Afternoon

An analysis of trauma related to severity and duration of Post Traumatic Stress Disorder (PTSD) was undertaken. Current literature was reviewed and examined to assess factors that influence the onset and severity of PTSD. Research indicates that traumatic events such as combat, sexual assault, or

witnessing violence or death contribute to the onset of PTSD. Factors that influence severity and duration of PTSD include severity of the traumatic event, multiple event exposures, and previous history of mental illness. Further examination of possible outcomes and recommendations are identified and include, wellness, daily living supports, and psychological treatments.

Moberly, Amanda

Heian Values found in Modern Japanese Society: The Traditional and Contemporary Roles of Men Woman and Children

Presenters: Moberly, Amanda

Undergraduate Presentation

Faculty sponsor: Fong, Adam

History

Oral Presentation

Spruce C

03:00 - 03:15 in the Afternoon

This paper discusses the influence of Heian values on contemporary gender relations in Japan. Japan has a reputation for strong and quick action particularly in the global economy, but that power comes from the traditions of the people within its borders; traditions that began during the Heian period of Japanese history. This paper argues that modern Japanese societal norms for men—such as strong discipline in the workplace, and national pride while at the same time tone must be able to communicate ones feelings—for woman, such as the value of virtue and proper motherhood, and for children—such as discipline and dedication to bettering themselves—are rooted in the values and morals of the Heian Court. The legacies of the past traditions continue to define Japanese culture today. This paper thus contributes to scholarly discussions on gender roles in Japan, cultural change and modernization, and the nature of “the family.”

Moe, Christine

How Teachers support the Development of Emergent Literacy among Young Children with Visual Impairments

Presenters: Moe, Christine

Graduate Presentation

Faculty sponsor: Richard, Veronica

Special Education

Poster Presentation
Mt. Evans Ballroom
1:30-2:30 in the Afternoon

While there is a growing body of knowledge and research about the acquisition of early Braille skills among school-age children, far less is known about the practice of facilitating emergent literacy skills in children under the age of five who are visually impaired.

This qualitative study will interview teachers who work with young children under the age of five with visual impairments about their own teaching practice and ask them to reflect on their perspectives concerning the underlying factors and supports necessary for the development of early literacy in children with severe visual impairments.

The purposive sample will consist of between six and ten Teachers of the Visually Impaired who work primarily in Early Intervention and Early Childhood Education, as these teachers spend a large portion of their time working specifically with young children under five who have visual impairments, and they are knowledgeable about factors influencing emergent literacy.

The research questions are as follows:

How do teachers of young visually impaired students understand their experiences in teaching early literacy skills to young children with visual impairments?

How do teachers of young visually impaired students perceive the emergent literacy development of their students?

This study aims to increase the body of knowledge relating to the field of emergent literacy by exploring the experiences of teachers who teach beginning literacy skills to young children who are blind or severely visually impaired. I anticipate that the findings will indicate that an enriched learning environment that supports early concept development support the development of early literacy. My belief is that most of the teachers interviewed will focus on providing their students with a wide range of experiences, activities, and literacy opportunities which support children's understanding of and interest in books rather than structured literacy instruction.

Moline, Candace

Needle-Stick Injuries in the Workplace - What is the True Cost?

Presenters: Moline, Candace

Graduate Presentation
Faculty sponsor: Hummel, Faye
Nursing

Poster Presentation
Mt. Evans Ballroom
01:30 - 02:30 in the Afternoon

The purpose of these poster presentations is to validate how the Advanced Practice Nurse (APN) can make a difference in the cost of hospitalization or other health care services by collaborating with the patient, family, physician or other individuals or agencies. Eleven cost-benefit projects were conducted by Family Nurse Practitioner students in which a procedure, healthcare practice or product was evaluated. Recommendations for potential change or modification in procedure or policy are included.

Montano, Andrea

An Examination of China's Explosive Growth: Is China's High Savings Rate a Sign of Prosperity or Doubt?

Presenters: Montano, Andrea
Undergraduate Presentation
Faculty sponsor: Bownas, Richard
Economics, Political Science

Oral Presentation
Spruce B
10:40 - 10:55 in the Morning

This study examines China's extremely high savings rate and its negative implications on the macro economy. China has experienced explosive growth leading to the nation's modernization and rapid economic development. Now, the world's second largest economy, the sustainability of China's growth is in question. Over the past 30 years, the Chinese government has implemented pragmatic reforms, which have led to massive investment in infrastructure and industrial and human capital, all mobilized by national savings. The nation's high savings rate can be attributed to the lack of access to social welfare institutions such as health and unemployment insurance, retirement, and education. As a result, the Chinese people postpone consumption to save for their future needs thus increasing the national savings. In an effort to balance the economy, where savings must be equal to investment, the government has emphasized investment due to lack of domestic consumer spending. This strategy is responsible for China's explosive growth, however, the prolonged

investment strategy, along with the incestuous relationship of the one-party state with business and banking, has caused economic inefficiency and overheating. China now faces a situation where a transition from their export-oriented to a domestic consumption economy is essential. However, issues of uncertainty that keep citizens from spending will have to be addressed before a successful transition can occur.

Moore, Molly

Community Group Counseling Plan for Displaced Mothers Living with Domestic Violence

Presenters: Moore, Molly; Rogalla, Kylie

Graduate Presentation

Faculty sponsor: Murdock, Jennifer

Clinical Counseling

Poster Presentation

Mt. Evans Ballroom

10:30 - 11:30 in the Morning

A theoretical group counseling design is presented to address the numerous needs of displaced mothers living with domestic violence. Domestic violence is highly correlated with homelessness and poverty, especially including women with children. In 2005, intimate partner violence was identified as a primary cause of homelessness in 50% of surveyed cities (U.S. Conference of Mayors). Additionally, nearly 50% of all women in the United States will raise their children alone at some point (Snyder, McLaughlin, & Findeis, 2006). Of these single-parent homes, more than 50% will experience poverty (Brady, 2006). In 2009, 29.9% of female householders were living under the poverty threshold (U.S. Census Bureau, 2010). As the number of women and children experiencing poverty increases (U.S. Census Bureau), it becomes clear that there is a significant need to provide assistance for this population. This group counseling design is one way of reaching out to this population in order to provide effective and accessible services. As a way of organizing a group design that will address the unique needs of this population, Maslow's Hierarchy of Needs will focus the progression of the sessions. Due to the time constraints of this population, integrating a solution-focused approach will also guide the efficiency of group sessions. Based on these theories, this group counseling design is divided into three main categories. Each category will contain a series of two groups, which are loosely tied to the theme. The three categories to be addressed will include physiological needs, safety needs, and love and belongingness. Ideally, all participants will leave each session feeling educated, supported, and informed

about opportunities to improve their quality of life. This comprehensive group design can be easily implemented in a variety of community organizations.

Morado, Amanda

Family Studies Research

Presenters: Cove, Nicole; Morado, Amanda

Graduate Presentation

Faculty sponsor: Moore, Mel

Sociology

Oral Presentation

Spruce C

09:20 - 09:55 in the Morning

Play and Learn is a program at Harrington Elementary in Denver Colorado that facilitates parent/child classes for children ages 0-4. Classes are held four times per week and are taught in both English and Spanish equally. The goals of Play and Learn are to academically and socially prepare children for school, expand their vocabulary to age-appropriate potential, and aid parents in becoming their child's first teacher. I am currently researching the effectiveness of Play and Learn and assessing the academic success of children who have been active in the program. I am doing this by comparing their assessment scores attained prior to entering the preschool program at Harrington Elementary against those of their peers who were not enrolled in Play and Learn prior to preschool. I am also examining past students' Developmental Reading Assessment (DRA) scores between kindergarten and third grade and comparing them to the school's reading proficiency level overall. To determine whether Play and Learn is reaching its goals, I am surveying the parents of the program.

Morgan, Danielle

Bleeding Kansas

Presenters: Morgan, Danielle; Roach, Erika

Undergraduate Presentation

Faculty sponsor: Boyce, Travis

Social Science

Poster Presentation

Mt. Evans Ballroom

10:30 - 11:30 in the Morning

Kansas' borders look pretty dull but their backgrounds of how they became the way they are, are pretty interesting; it all started with a debate known as "Bleeding Kansas." The southwest corner of Kansas was established in 1846 when it wanted to still be considered a slave state to the Union. In order to keep that title of a slave state they had to be above the 36*30' due to the Missouri Compromise.

The Missouri Compromise was not what everyone in the Union particularly wanted so Senator Douglas took it upon himself to figure out a solution to everyone's worries. He took on an idea known as "popular sovereignty." With that idea in place, the people living in Kansas would be able to decide for themselves whether or not slavery should be allowed on their own area of land. Due to Nebraskans moving towards their southern border, below the Platte River, the Northern Border was created. This happened so that the people who were still okay with slavery being a part of their lifestyle would be able to do it without causing more debates. Congress later rejected that proposal though since they thought they had a better idea of how the Northern Border should be created, popular sovereignty.

After all the debate over whether popular sovereignty would work or not, Congress implemented the northern border as where the 40* line stands. The northern and southern borders obviously had a ton to do with slavery and what is considered to be right or wrong with allowing it, but in the end equal right for everyone triumphed. Looking at its western border though, there was a gold discovery in the Kansas Mountains in 1858 which brought in over 50,000 foreigners. These foreigners made up a large part of the state's Western border.

Muir, Heather

Content analysis: Using a mixed-methods approach to analyze television portrayals of Olympic hockey players

Presenters: Muir, Heather

Graduate Presentation

Faculty sponsor: Gray, Dianna

Applied Statistics & Research Methods, Sport & Exercise Science

Poster Presentation

Mt. Evans Ballroom

01:30 - 02:30 in the Afternoon

In content analysis, the categories usually are developed deductively from a review of literature and the nature of the research questions (Holsti, 1969). Categorizing and quantifying data allows researchers to use quantitative methods to test hypotheses and determine statistically significant differences. In 2000, Mayring suggested an alternative way of blending quantitative and qualitative procedures to inductively create categories. The researcher begins with initial categories derived from background theories and the literature review. Then, after reviewing the first 10% of the texts, the researcher compares the initial categories with the content of the first 10% of the texts, and the list of potential categories is revised to correspond with the first portion of the texts. This continues piece by piece until all of the texts have been analyzed and adjustments have been made to the list of categories. Each category from this list is compared with others so that similar categories are combined and renamed so that the list of categories is kept to a workable number of categories. For each category on the final list, the researcher needs to provide a name, write an operational definition, and provide examples of texts that fit that category. Finally, the researcher categorizes and quantifies each text of the study into this new classification scheme in order to run quantitative statistical analyses, if called for by the research questions.

This study will follow Mayring's example of inductively creating a list of categories. The descriptive, informative, and evaluative comments spoken by the television commentators will be transcribed, analyzed qualitatively, and used to create categories. This poster will describe the development of the classification scheme and categories through qualitative means in order to quantitatively compare the media's description of female and male hockey players.

Muller, Heidi

Working Through Group Conflict: Lessons from Theory and Life

Presenters: Bonds, Rhonda; Lewis, Janelle; Macias, Odil; Muller, Heidi;

Undergraduate and Faculty Presentation Presentation

Faculty sponsor: Muller, Heidi

Communication Studies, Psychology

Oral Presentation

Aspen C

09:00 - 09:35 in the Morning

In this presentation three different takes on conflict in small groups will be articulated. One examines transformative vs. transactional leadership in making conflict productive in small groups. The second addresses strategies for

working through conflict between roommates highlighting cases where there are racial differences. The third proposes a three part model for building trust through cohesion and conflict. The conclusions presented will be practical in nature, incorporating theory, findings from experimental studies and real life communication experiences. The ideas presented will include suggestions for how to work through conflict productively and creatively using theoretically informed communication practice in small group settings.

Murphy, Conner

The Effects of Centralized Fiscal Reform on Rural Chinese Development

Presenters: Murphy, Conner

Undergraduate Presentation

Faculty sponsor: Bownas, Richard

Economics, Interdisciplinary Studies, Political Science

Oral Presentation

Aspen C

02:00 - 02:15 in the Afternoon

The purpose of this research is to analyze the effects of political and fiscal decentralization upon Chinese rural poverty, focusing particularly upon the financial burden created by regressive rural tax policy in specific regions. Furthermore, this paper examines key aspects of recent centralized tax reforms, known as 'Tax-for-Fee Policy', investigating the causes and prospective outcomes of these changes. Through comparing the issues of previous rural tax policies and the outcomes of recent modifications, it is shown that centralized government action has led to a large reduction in the financial burdens of rural Chinese citizens. However, this research also shows that while centralized reform is necessary for reducing poverty in rural china, it is not sufficient in eliminating the financial burdens of China's poorest citizens.

Murphy, Karolyn

Lessons on How to Teach Critical Thinking at the Elementary Level

Presenters: Combs, Johanna; Murphy, Karolyn

Undergraduate Presentation

Faculty sponsor: Boyce, Travis

Educational Studies

Poster Presentation
Mt. Evans Ballroom
01:30 - 02:30 in the Afternoon

Through an elementary lesson on state history students will gain knowledge in how to ask critical questions about historical fact. The method used and examined is based on the formation of excellent lesson plans that are multifaceted. The project will examine how to go about setting up a lesson plan that incorporates critical thinking from students at any age level and encouraging multiple perspectives. It will also incorporate strategies for finding reliable sources to use through the lesson along with appropriate activities.

This type of lesson plan will help teachers prepare lessons that will continue to apply to the lives of the students after they leave the classroom because; they will be able to ask questions instead of accepting everything that is handed to them as fact. This may not be a skill that every teacher wants to deal with because students might begin questioning everything, but it is through thorough questioning that we learn more about a subject we enjoy. Any college research paper requires analyzing and questioning the facts and posing an argument. By learning the right questions to ask and how to go about looking further into a topic the students will be more successful when they have to write papers on their favorite topics. I want students to be able to think critically before they reach high school so they are better prepared to look into hard topics and prepare more detailed essays.

Nesbitt, Keatra

The Elusive Rank 9: Finding Elliptic Curves of High Rank

Presenters: Nesbitt, Keatra

Undergraduate Presentation

Faculty sponsor: Soto-Johnson, Hortensia

Mathematics

Oral Presentation

Spruce C

02:00 - 02:15 in the Afternoon

There is only one abelian group of order 8 that is noncyclic but that contains a cyclic subgroup of order 4. In 1973, Andrew Ogg showed that there exist infinitely many elliptic curves defined over the rationals with this group as its

torsion subgroup. In 2005, K. Ansalidi, A. Ford, J. George, K. Mugo, and C. Phifer generalized ideas of N. Rogers from 2000 to find curves with rank 0 through 6. Today, the largest known rank of such curves is 8. This project seeks

to extend ideas of Ansaldi et al. to find an elliptic curve in this family with rank 9. To do this, we develop an algorithm to generate a list of rational k 's and then analyze these k values to find the rank of each curve. We implement our ideas on a high performance computing cluster at Miami University of Ohio.

Nieman, Lauren

Altering the Genome of Carrots to Fight Malaria

Presenters: Nieman, Lauren

Undergraduate Presentation

Faculty sponsor: Keenan, Susan

Biological Sciences

School of Biology Poster Presentation

Mt. Evans Ballroom

12:00 - 01:00 PM

Malaria is the fifth leading cause of infectious disease worldwide and results in the death of approximately 2 to 3 million people each year (1). Because the current prevention mechanisms for the disease are too expensive to offer substantial protection to endemic populations or have become ineffective due to developed resistance of the parasite, an inexpensive and effective method is needed to combat this disease. The focus of this research is to create a transgenic carrot that would serve as an edible malaria vaccine by expressing genes from *P. falciparum*, the species responsible for ~90% of all malaria deaths (1). Three genes that encode for surface antigens, one from each stage of the parasite's life cycle, have been chosen for the vaccine. The genes include SSP2 (expressed during the liver stage), MSP119 (expressed during the blood stage), and Pfs4845 (expressed during the sexual stage) (2-4). Each of these genes has been successfully isolated, sequenced, and incorporated into the plant expression vectors pSAT1, pSAT6 and pSAT4, respectively, each with a different auto-fluorescent protein tag. Several expression cassette transfer steps must be completed to combine all three genes into one binary vector, pPZP-RCS1. The binary vector will then be transformed into the bacterial species *Agrobacterium tumefaciens*, which will be used to incorporate all three surface antigen genes into the genome of *Daucus carota* calli. The calli will develop for a period of 6 to 8 weeks, after which time they will be harvested and tested for expression of each surface antigen using Western blot and ELISA analyses. Once positive expression has been confirmed, the carrots will be tested on BALB/c mice to determine their ability to elicit an immune response. If effective in vivo, this edible vaccine could continue to be developed as a cost effective immunization strategy to aid in the prevention of malaria.

Noval, Jennifer

Use the Education Buoy to Prevent Drowning in Would Care Costs

Presenters: Novak, Jennifer

Graduate Presentation

Faculty sponsor: Hummel, Faye

Nursing

Poster Presentation

Mt. Evans Ballroom

01:30 - 02:30 in the Afternoon

The purpose of these poster presentations is to validate how the Advanced Practice Nurse (APN) can make a difference in the cost of hospitalization or other health care services by collaborating with the patient, family, physician or other individuals or agencies. Eleven cost-benefit projects were conducted by Family Nurse Practitioner students in which a procedure, healthcare practice or product was evaluated. Recommendations for potential change or modification in procedure or policy are included.

Ourada, Brenda

The Importance of Classifying Hoarding as a Unique Mental Disorder

Presenters: Manetta, Lisa; Mendoza, Angela; Ourada, Brenda; Weichselbaum, Julia

Graduate Presentation

Faculty sponsor: Ososkie, Joseph

Gerontology

Poster Presentation

Mt. Evans Ballroom

01:30 - 02:30 in the Afternoon

A review of the current literature on the differences between hoarding and Obsessive Compulsive Disorder (OCD) was undertaken. Both qualitative and quantitative literature regarding differences between hoarding and OCD was explored. This examination reveals that hoarding is characteristically different from OCD in many ways, which affects intervention effectiveness. Since approximately 1.8 million people in the United States can be classified as hoarders, it is imperative to address the need for a unique diagnosis.

Recommendations for effective intervention strategies that address the benefits for individuals and communities at large are also included.

Owsley, Kendra

How Do You Teach Mexican American Students With Skill and Cultural Competence?

Presenters: Owsley, Kendra; Reffel, Scott; White, Nicolle

Undergraduate Presentation

Faculty sponsor: Canales, Genie

Educational Studies, Educational Leadership, Educational Mathematics, Educational Psychology, Mexican American Studies, Psychology

Oral Presentation

Columbine A

01:00 - 01:55 in the Afternoon

Mexican Americans (or Chicanas/os) make up 64% of Latinas/os, the fastest growing ethnic group in the United States. Approximately 1 in 8 persons in the United States is Latina/o, with projections that by the year 2050, the number will be 1 in 4 (U. S. Census Bureau, 2000). The implications for U. S. classrooms are clear: educators must not only be skilled in teaching; they must also have knowledge of Mexican American culture and how to integrate it into their teaching. In this interactive panel, attendees will receive a brief introduction to one excellent teaching tool and to the major Mexican American cultural values. The teaching tool is the 4MAT Model of Learning/Teaching, which promotes teaching to four different learning styles (Why? What? How? What if?). Then, attendees will observe 3 students who will each deliver a lesson integrating the four learning styles as well as Mexican American cultural values. The audience will analyze each lesson by filling out a checklist of teaching behaviors that reflect the four learning styles as well as values that reflect Mexican American culture. Attendees will receive handouts summarizing the model and listing the most important Mexican American cultural values.

Parry, Traci

Endurance Exercise Attenuates Cardiotoxicity Induced by Androgen Deprivation and Doxorubicin

Presenters: Parry, Traci

Graduate Presentation

Faculty sponsor: Hayward, Reid
Sport & Exercise Science
Research Excellence Award Finalist

Poster Presentation
Mt. Evans Ballroom
10:30 - 11:30 in the Morning

Besides doxorubicin's (DOX) well known cardiotoxic effects, it is associated with irreversible testicular damage. In an attempt to preserve testicular function during DOX treatment, androgen deprivation therapy (ADT) using goserelin acetate is gaining clinical popularity as it temporarily suppresses gonadal function thereby minimizing DOX's gonadal damage. However, DOX's cardiac dysfunction is a major clinical concern as well, and evidence suggests that ADT may exacerbate DOX-induced cardiac dysfunction. Exercise has been shown to protect against DOX-induced cardiac dysfunction, but the effects of exercise on cardiac function during combined ADT and DOX treatment are currently unknown.

PURPOSE: To determine whether exercise training can attenuate the combined cardiotoxic effects of ADT and DOX.

METHODS: Male Sprague Dawley rats were randomly assigned to experimental groups: control implants (CON), androgen deprivation therapy (ADT), doxorubicin (DOX), or (ADT+DOX). Animals received ADT or control implants on day 1 and 29 of the 56 day protocol. Animals were then assigned to either sedentary activity (SED) or forced treadmill endurance exercise (TM). On day 15, animals received DOX at 1.5 mg/kg/d i.p. for 10 consecutive days or an equivalent volume of 0.9% SAL. On day 57, cardiac function was assessed in vivo (echocardiography) and ex vivo (isolated perfused working heart).

RESULTS: DOX alone as well as ADT+DOX treated animals possessed significantly ($P < 0.05$) depressed left ventricular developed pressure (-21% vs. -27%), maximal rate of pressure development (-29% vs. -32%), and minimal rate of pressure development (25% vs. 31%) respectively compared to sedentary control animals. Endurance exercise training attenuated ($P > 0.05$) all cardiotoxic effects of ADT+DOX treatment.

CONCLUSIONS: Treadmill training protected against ADT+DOX dysfunction, suggesting that cardiac function can be preserved in the clinical setting if cancer survivors concurrently endurance train while undergoing ADT and DOX treatment.

Peters, Annette

Dispositional Humility and Social Relationship Quality: Is there an Association?

Presenters: Peters, Annette
Graduate Presentation
Faculty sponsor: Wright, Stephen
Counseling Psychology

Poster Presentation
Mt. Evans Ballroom
10:30 - 11:30 in the Morning

Forming and maintaining quality social relationships with family, friends, co-workers, and others may depend, in part, on the ability to humbly defer self-interest to others. Being too self-focused or arrogant could negatively affect relationship quality. Previous research connected the Big Five personality dimensions with relationship satisfaction. The primary purpose of the two studies reported was to examine the relationship between humility and social relationship quality, and to determine whether the relationship persisted when other personality dimensions were statistically controlled.

The studies examined the following research questions: (a) are measures of dispositional humility and social relationship quality related (Study 1); and (b) do humility-relationship quality connections still remain when statistically controlling for the Big Five personality dimensions and other personality variables implicated in social well-being (Study 2)?

Participants completed self-report measures of humility and relationship quality. In Study 1 and 2, humility and social relationship quality correlated positively. We also found self-reported and other-reported humility correlated positively, which is worth noting because it could be argued that some humble persons do not self-report being humble. Furthermore, we used hierarchical regression analyses to examine whether humility accounted for unique variability in social relationship quality above and beyond the Big Five for the 258 participants in Study 2. Results indicate that self and other-reported humility correlated positively with SRQ, even when social desirability (Study 1) and other relevant personality dimensions (e.g., Big Five, agency, communion) were statistically controlled (Study 2). These findings indicate humility could be an important trait with regard to interpersonal relations.

Peters, Annette

The Role of Support in College Adjustments for Veterans

Presenters: Ingala, Ann; Peters, Annette; Softas-Nall, Basilia

Graduate and Faculty Presentation Presentation

Faculty sponsor: Softas-Nall, Basilia

Counseling Psychology

Research Excellence Award Finalist

Poster Presentation
Mt. Evans Ballroom
10:30 - 11:30 in the Morning

The increase of military service members and veterans entering college with the Post 9/11 GI Bill is important to note because transitioning from military to college life is complex. This transition can be even more difficult for individuals with physical and mental health concerns. Perceived social support for individuals dealing with trauma is very important and therefore it is surprising that so little is known about current levels of support for student veterans on college campuses (Herman, 1997; Naparstek, 2004; Sherman, Zanotti, & Jones, 2005).

Survey results from 128 student veterans / military at two- and four-year institutions were examined through multiple regression. Participants completed the following measures: Student Adaptation to College Questionnaire (SACQ; Baker & Siryk, 1999), three sections—Combat Experiences, Unit Support, and Postdeployment Support—of the Deployment Risk and Resilience Inventory (DRRI; King, King, & Vogt, 2003), and the Posttraumatic Stress Disorder Checklist-Military version (PCL-M; Weathers, Litz, Herman, Huska, & Keane, 1993). The PTSD, unit support, and post-deployment support variables contributed uniquely to the explanation of college adjustment. Student veterans and military with higher levels of reported PTSD symptoms had lower levels of college adjustment; those reporting higher levels of unit support and postdeployment support had higher levels of college adjustment.

The results of the current study support previous research demonstrating the importance of perceived social support in buffering the effects of PTSD. The current findings give institutions of higher education insight into dealing with student veterans by indicating how critical perceived support is for successful transition to college.

Peters, William

Employee Loyalty: An Analysis of Contributing Factors

Presenters: Johnson, Sara; Peters, William

Undergraduate Presentation

Faculty sponsor: Clinebell, Sharon

Business Administration

Oral Presentation
Columbine A
02:00 - 02:35 in the Afternoon

The purpose of this presentation is to review the factors that contribute to employees' loyalty to companies. Google will be used as an example of a company that fosters employee loyalty.

Peterson, Brent

Cancer-Related Fatigue and the Impact of Psychological and Physiological Variables

Presenters: Peterson, Brent

Graduate Presentation

Faculty sponsor: Schneider, Carole

Sport & Exercise Science

Poster Presentation

Mt. Evans Ballroom

01:30 - 02:30 in the Afternoon

Fatigue has a negative impact on individuals during and following cancer therapy. Fatigue appears to be manifested early in the disease process and often worsens with treatment. There is minimal information on what psychological and physiological parameters contribute to cancer-related fatigue. **PURPOSE:** To assess potential psychological and physiological variables that may contribute to cancer-related fatigue. **METHODS:** A total of 593 cancer survivors, including 127 males (62.0 ± 13.7 yrs) and 466 females (55.0 ± 11.8 yrs) that had undergone radiation and/or chemotherapy were eligible for this study. Participants completed Piper fatigue and Beck depression inventories. Additionally, a comprehensive physical assessment was performed prior to the exercise intervention. Physical performance was determined during an initial assessment including VO₂ peak (multistage treadmill protocol), muscular endurance (paced submaximal protocol to fatigue), body composition (skinfolds), and body weight. A multiple imputation regression analysis ascertained the effects of multiple variables on fatigue. **RESULTS:** Depression, body weight, lower body endurance, and age were significantly ($P < .05$) associated with cancer-related total fatigue. VO₂ peak approached significance ($P = .07$) while upper body endurance and body fat percentage were not significantly associated with total fatigue. **CONCLUSION:** The results of this study imply that activities of daily living may be more difficult in cancer survivors with greater body weight and poor body strength ultimately increasing total fatigue. Therefore, cancer rehabilitation programs need to include interventions addressing decrements in cancer survivors' ability to complete activities of daily living as opposed to improving athletic performance.

Peth, Scott

Feed it Forward

Presenters: Peth, Scott
Undergraduate Presentation
Faculty sponsor: Allen, Lin
Communication Studies

Oral Presentation
Aspen C
09:40 - 09:55 in the Morning

This one concept from Richards when used correctly and accurately can be wielded like an iron sword for any given individual on their path to success. If an individual is able to “Select meanings similar to those envisioned by the source,” consistently, and passionately, then that individual will have power. This is evident with our current President of the United States, Barak Obama. After eight years of war, terror, and misleading, and misguided figureheads in the White House, the United States was a country desperate for one thing, change. Obama came in with a fresh attitude and a finger on the pulse of America. He had heard about people’s past experiences first hand, and he was aware of what was relevant to the average man or woman of America. Because of these skills, and his ability to accurately predict feedforward, he became President.

Feedforward along with many other I.A. Richards concepts or thoughts is brilliant, and kind of spine-tinglingly magical because of how applicable it is to our lives. I believe that when someone is introduced to a concept that is so relevant to their life, it is hard not be passionate about it. When we have a greater ability to understand our past experiences, and to make meaning and sense of them through words or actions, then we will no doubt have a greater chance at living a more fulfilling and rewarding life.

Pina-Green, Hatzyry

In search of new space in the U.S.-Mexico Borderlands

Presenters: Castorena, Roman; Pina-Green, Hatzyry; Vargas, Rodolfo
Undergraduate Presentation
Faculty sponsor: Park, Jungwon
Spanish

Oral Presentation

Columbine B
11:00 - 11:15 in the Morning

These papers examines cultural symbols and cinematic metaphors in the film "The Garden of Eden" directed by María Novaro (1994) This Mexican film gives in many ways an insight of living together in the globalized world among heterogenous people of different nationalities, races, languages and social classes. The papers will be presented in Spanish.

Pinon, Angela

Stryker Institute: Breaking Barriers Through Leadership Development

Presenters: Pinon, Angela

Undergraduate Presentation

Faculty sponsor: Houser, Jeffrey

Sociology

Poster Presentation

Mt. Evans Ballroom

01:30 - 02:30 in the Afternoon

The Stryker Institute for Leadership Development is an organization that provides financial and academic support, as well as leadership enhancement training, to non-traditional female students at the University of Northern Colorado. The institute was founded by Rhonda Stryker, an alumna of the University of Northern Colorado, who has been it benefactress for the last 10 years. The purpose of my research on the Stryker Institute is to ascertain the overall effects of this program on its participants; educationally, professionally, and personally. More specifically, I wish to substantiate and present corroborating evidence of this organizations assertion that it provides educational and leadership development opportunities to women that may not otherwise receive them. Moreover, that the programs objectives ultimately enrich the lives of the women it serves and assists them in obtaining essential tools for success in life. The methods that will be used to obtain data will include personal interviews with Stryker participants, and a survey designed to evaluate the program's effectiveness in providing resources that increase GPA, self-esteem, leadership skills, and graduation rates.

Quinn, Andrew

Rationalization and Iron Cage: A Critique of Students' Perceptions of Higher Education

Presenters: Quinn, Andrew
Undergraduate Presentation
Faculty sponsor: Henderson, Angela
Sociology

Research Excellence Award Finalist

Poster Presentation
Mt. Evans Ballroom
01:30 - 02:30 in the Afternoon

Using Max Weber's critique of bureaucratic institutions and their tendency to impose an iron cage, this research examines the organization of higher education and its role in the motivation and attitudes of the students. Higher education is an institution that thrives on efficiency and profit, often at the cost of education and beneficence of the students. Students often exploit the efficiency of education and rationalize pursuing higher education to obtain a degree as opposed to the pursuit of knowledge. The work herein observes cost of tuition and fees, ratio of full-time professors to assistant and part-time professors, as well as information from current students concerning their attitudes about and motivation for attending a higher education institution. Results indicate that students are rationalizing their efforts in higher education as a means to an end, and not an opportunity to discover joy in learning. In light of Weber's evaluation of bureaucracies, results are discussed with regard to the role of higher education in students' rationalization of their educational experience.

Quinn, Susan

Spinal Cord Stimulation: A More Cost-Effective Method of Treating Chronic Low-Back Pain

Presenters: Quinn, Susan
Graduate Presentation
Faculty sponsor: Hummel, Faye
Nursing

Poster Presentation
Mt. Evans Ballroom
01:30 - 02:30 in the Afternoon

The purpose of these poster presentations is to validate how the Advanced Practice Nurse (APN) can make a difference in the cost of hospitalization or

other health care services by collaborating with the patient, family, physician or other individuals or agencies. Eleven cost-benefit projects were conducted by Family Nurse Practitioner students in which a procedure, healthcare practice or product was evaluated. Recommendations for potential change or modification in procedure or policy are included.

Ramos, Mary

Colonial Latin America

Presenters: Chavez, Erick; Garcia, Jena; Ramos, Mary; Vargas, Rodolfo

Undergraduate Presentation

Faculty sponsor: Park, Jungwon

Spanish

Oral Presentation

Spruce A

01:20 - 01:35 in the Afternoon

This panel explores colonial Latin America, particularly the contradictory and controversial role of Catholic Church through the film "The Mission." The papers will be presented in Spanish.

Rascon, Nora

Common Experiences Amongst Victims of Residential Burglary Who Report Their Victimization

Presenters: Rascon, Nora

Undergraduate Presentation

Faculty sponsor: West-Smith, Mary

Criminal Justice, Psychology

Poster Presentation

Mt. Evans Ballroom

10:30 - 11:30 in the Morning

Burglary is a very common crime, yet one that is frequently overlooked. In 2008, 2,222,196 burglaries of United States residences, businesses and government agencies were reported to local law enforcement agencies (U.S. Department of Justice, Federal Bureau of Investigation, 2009). It is also a crime that frequently goes unreported. According to the National Crime Victimization Survey, the Bureau of Justice Statistics estimated that only 56% of victims of

residential burglaries reported their incident (Rand, 2009). The purpose of my research project is to investigate the commonalities amongst burglary victims. We seek to explore the common experiences of victim(s) of residential burglaries who report their victimization. The participants will be interviewed and asked about the details of their victimization. A major benefit of this qualitative research is the ability to learn more about victims of burglary, which in the past has been frequently ignored.

Rasson, Jonathan

The Status and Portrayal of Women From the Tokugawa Period to Modern Day

Presenters: Rasson, Jonathan

Undergraduate Presentation

Faculty sponsor: Fong, Adam

History

Oral Presentation

Spruce A

11:40 - 11:55 in the Morning

This paper discusses how, over time, the social status of women in Japan has slowly grown from their traditional roles--working in the home and being subservient to their husband--to a status of freedom and independence in the modern era. These changes in women's social status parallel the cultural portrayals of women such as in media and literature by providing an excellent way to examine how the changes in the social status of women affected the culture of Japan. This paper argues that the position of Japanese women from the Tokugawa period to the modern age slowly changed from the expectations of a traditional role to more modern, free-thinking women that maintained some of the traditional aspects of earlier generations, which altered the portrayal of women in their culture. These changes in women's status can be accounted for by the westernization and globalization that entered Japan, which then caused changes in the Japanese government and industry, and thus provided women the opportunity for social mobility. Therefore, this paper demonstrates that these changes show how the women of Japan will continue to juggle the diverse roles of traditions as wife, mother, and also the new roles of whatever else they want for themselves. Also, these changes display how the relationships between men and women of Japan have greatly changed the expectations of the future, into an era of relative equality. This paper thus contributes to the scholarship of gender, globalization of Japan, and how it has been represented in popular culture.

Reams, Lamar

An Investigation of Division I Collegiate Wrestlers' Perceptions of Mixed Martial Arts (MMA)

Presenters: Reams, Lamar
Graduate Presentation

Faculty sponsor: Stotlar, David
Sport & Exercise Science

Poster Presentation
Mt. Evans Ballroom
10:30 - 11:30 in the Morning

At many universities, wrestling has been cut or altogether removed from many athletics programs (Ridpath, Yiamouyiannis, Lawrence, & Galles, 2008). Nevertheless, despite the difficult times that collegiate wrestling is currently in the midst of (Cooper & Weight, 2009), the professional mixed martial arts (MMA) league, the Ultimate Fighting Championship (UFC), has seen former collegiate wrestlers experience a tremendous level of fighting success within their ranks. In fact, at one point in the latter of half of 2010, every American fighter in the UFC had some collegiate wrestling experience (Gross, 2010).

Previous research in the area of student-athlete career transitioning led to the development of Sandstedt et al.'s (2004) Student-Athlete Career Situation Inventory (SACSI), assessing the prospect of student-athletes continuing their athletic career professionally has been limited. Studies that have addressed the topic have displayed a propensity to focus more on the sociological aspects of African American student-athletes and their aspirations of playing professionally in one of three traditional sports: football, basketball, or baseball (Sailes, 1998). As such, noting the timeliness of the aforementioned topic, the following research question is guiding the study: What are the perceptions of collegiate wrestlers relative to a future career in MMA?

Employing a qualitative methodology, the current study consists of semi-structured interview questions of Division I intercollegiate wrestlers at a mid-sized university in the Rocky Mountain region. Interviews are anticipated to conclude in March 2011, with data analysis occurring concurrently. Findings will shed light on what factors contribute to a collegiate wrestler's decision to attend their university of choice and their overall perceptions of MMA as an option to continue their athletic careers. Results could also aid universities and athletic departments in future recruiting efforts and in the hiring of wrestling coaches depending upon the sentiments expressed by the participants.

Reams, Lamar

The Motives of Fans Attending Local Intercollegiate Wrestling Events

Presenters: Reams, Lamar

Graduate Presentation

Faculty sponsor: Stotlar, David

Sport & Exercise Science

Poster Presentation

Mt. Evans Ballroom

10:30 - 11:30 in the Morning

Today it has become common knowledge that men's basketball and football are the two primary revenue-generating sports in all of intercollegiate athletics (Fink, Trail, & Anderson, 2002). Though the revenues generated by these respective sports often support the less glamorous Olympic sports in the athletic department, research and improved marketing efforts are necessary to increase attendance and interest in the Olympic sports (Cooper, 2009; James & Ross, 2004). To this end, Cooper and Weight (2010) developed the Wrestling Consumer Preference Scale (WCPS) coupled with a recommendation for further research into the motives of fans attending intercollegiate wrestling events in a multitude of environments; specifically, events at the local, regional, and national levels. Taking the previous works into consideration, the purpose of this study was to survey spectators to learn their motives to attend a local intercollegiate wrestling event.

As such, fans attending an intercollegiate wrestling event at a mid-sized university in the Rocky Mountain region were surveyed. The WCPS instrument was distributed containing the motivational preferences of: achievement, entertainment, individual match-ups, individual wrestler affiliation, learning opportunity, socialization, team affiliation, and wrestling loyalty (Cooper & Weight, 2010). In observation of the fact that minimal empirical research has been conducted within intercollegiate athletic departments (Fink et al., 2002), results from the current study will aid athletic administrators in discovering what motivates fans to attend local intercollegiate wrestling events. As a result, in an effort to improve attendance and the revenues associated with intercollegiate wrestling, collegiate sport marketers will have data to tailor their future marketing efforts to meet the motivational preferences of local intercollegiate wrestling event attendees.

Repka, Christopher

Oxidative Stress and Hematological Responses to Multimodal Exercise in a Cancer Survivor Receiving High-Dose Chemotherapy

Presenters: Repka, Christopher
Graduate Presentation

Faculty sponsor: Schneider, Carole
Sport & Exercise Science

Research Excellence Award Finalist

Poster Presentation

Mt. Evans Ballroom

01:30 - 02:30 in the Afternoon

Despite evidence from animal models indicating that oxidative stress and hematological responses mediate the side effects of many cancer chemotherapy regimens, no clinical studies to date have examined oxidative stress and hematological dynamics in cancer survivors during chemotherapy, and potential modulation with exercise.

PURPOSE: To determine the effects of exercise on reactive carbonyl derivatives (RCD), a marker of oxidative stress, and hematological parameters in a cancer patient receiving chemotherapy. Additionally, to evaluate alterations in functional parameters.

METHODS: The subject was a 60-yr-old female, diagnosed with stage IIIC1 endometrial cancer, receiving chemotherapy (paclitaxel and carboplatin). Assessments evaluating functional parameters (muscular strength, VO_{2peak} , fatigue) were performed one day prior to the first chemotherapy cycle and again at 3- and 6-months. Exercise was performed three times per week for one hour and consisted of treadmill walking and total body strength exercises. Plasma RCD concentrations were measured only at nadir time points, while white blood cells (WBC), red blood cells (RBC), hemoglobin (HGB), and platelets (PLT), were collected prior to each treatment and at nadir.

RESULTS: The subject had high baseline plasma RCD ($6.13 \text{ nmol}\cdot\text{mg}^{-1}$), likely associated with her tumor burden. Following the exercise intervention, RCD levels dropped to 24% of baseline ($1.47 \text{ nmol}\cdot\text{mg}^{-1}$). VO_{2peak} improved 16% between baseline and 6-months (23.0 to $27.3 \text{ mL}\cdot\text{kg}^{-1}\cdot\text{min}^{-1}$). Combined upper body strength increased 21%, while combined lower body strength improved by 9%. Both WBC and PLT concentrations dropped during the course of chemotherapy (-66.5% and -55.8%, respectively), but rebounded to within normal ranges following each nadir period.

CONCLUSION: Even during a chemotherapy regimen which reduced WBC and PLT concentrations, a prescriptive exercise intervention mediated an increase in VO_2 peak and muscular strength with a concomitant decrease in oxidative stress.

Riggio, Beverly

Better Side Effect Management: The Effect of Implementing the Medical Home Model (MHM) in Decreasing Hospitalization Rates

Presenters: Riggio, Beverly

Graduate Presentation

Faculty sponsor: Hummel, Faye

Nursing

Poster Presentation

Mt. Evans Ballroom

01:30 - 02:30 in the Afternoon

The purpose of these poster presentations is to validate how the Advanced Practice Nurse (APN) can make a difference in the cost of hospitalization or other health care services by collaborating with the patient, family, physician or other individuals or agencies. Eleven cost-benefit projects were conducted by Family Nurse Practitioner students in which a procedure, healthcare practice or product was evaluated. Recommendations for potential change or modification in procedure or policy are included.

Riggs, Jamie

Intermediate-and High-Mass Star-Forming Regions: Making Stars at Mass Column Densities $< 1 \text{ g/cm/cm}$

Presenters: Riggs, Jamie

Graduate Presentation

Faculty sponsor: Lalonde, Trent

Oral Presentation

Aspen C

10:40 - 10:55 in the Morning

An analysis of the sample of the Arvidsson, et. al., Intermediate-Mass Star-Forming Regions at mass column densities $< 1 \text{ g/cm/cm}$ was analyzed using histograms, box plots, region probabilities, and a statistical general linear modeling techniques. The analysis examined the data for overlap characteristics in the column densities of the Intermediate Mass Star Forming Regions (IMSFR) and Ultra-Compact HII (UCHII) regions.

Rodriguez, Paula

Effect of Learning Academy Intervention Model on Hispanic Student Achievement

Presenters: Rodriguez, Paula

Graduate Presentation

Faculty sponsor: Karlin, Nancy

Educational Psychology

Oral Presentation

Columbine B

09:00 - 09:15 in the Morning

Purpose and Methodology: Between 1988 and 2008, the percentage of public school students who were White decreased from 68 to 55 percent. During this period the percentage of Hispanic students doubled from 11 to 22 percent, and in 2008, Hispanic enrollment exceeded 10 million students (National Center for Educational Statistics [NCES], 2010). The National Center for Educational Statistics also reported in 2007 that between 1997 and 2007, 25% of Hispanics were classified as school dropouts. It is because of the rapid increase of Hispanic students entering the public school system and their high rate of dropout that one high school in Northern Colorado decided to try to increase graduation rates by forming a Learning Academy for at-risk students. The author will follow the 86 students who completed the program during the 2009-2010 academic year through the 2010-2011 academic year to determine if this program has a significant impact on Hispanic at-risk student achievement and retention. The study hopes to show that decreased class size, shortened class periods, and individualized attention will strongly correlate with increased grade point averages, retention in school, and proficiency on the CSAP for math and English. Data was collected for all of the participants in the Learning Academy from the prior school year for GPA, CSAP, and English language ability. This data will be compared to the data from these students for the current school year who have been assimilated into regular classroom environments.

Conclusion: The hypothesis that the Learning Academy Model would positively and significantly impact GPA and school retention cannot be substantiated. Further data analysis will be performed during the current school year and numerical equivalence of CSAP data will be obtained to determine what impact ESL, English language proficiency, gender, and language spoken at home have on GPA and retention in school.

Romero, Christina

The Metaphor: A Remedy to Misunderstanding

Presenters: Romero, Christina

Graduate Presentation

Faculty sponsor: Romero, Christina

Communication Studies

Oral Presentation

Aspen C

11:00 - 11:15 in the Morning

Communication surrounds us everyday and everyday we take for granted what we say and how we say it. These messages then add up to misunderstandings, which are like disorders in communication that we can avoid by considering the remedies offered by rhetorical theorist I.A. Richards. The list of remedies includes definitions, literary context, specialized quotation marks, and most importantly, metaphors. According to Richards, the use of metaphors is not only a remedy to prevent misunderstanding in communication, but to create meaning and experience within the communication process. In this presentation Richard's value of metaphors will be explored through an analysis of President Barack Obama's Presidential Inaugural Address. After this examination one will see how influential metaphors are in both everyday life and the political platform.

Romero, Deborah

Understanding English as a Second Language Acquisition Processes: Findings from ESL pre-service teachers' studies of local learners and schools. Part I.

Presenters: Bay, Becca; Cingoranelli, Danielle; Lutjens, Erika

Undergraduate and Faculty Presentation Presentation

Faculty sponsor: Romero, Deborah

Oral Presentation

Spruce C

10:40 - 11:55 in the Morning

Over the past few years, Colorado has seen over 200% growth in English language learners in schools across the state. This change in classroom demographics puts increasing importance on the preparation and graduation of qualified teachers, who possess sound knowledge about how linguistically diverse individuals learn and acquire a second language, as well as the skills and dispositions to work and support their academic success in K-12 education.

With these points in mind, this panel shares findings from undergraduate pre-service English as a Second Language (ESL) teachers and their projects which explore how English language learners acquire and develop communicative and academic competence. As part of their ESL preparation, and in order to ground their understanding of theories of second language acquisition, linguistics and other sociocultural variables that affect student learning, pre-service ESL teachers were required to conduct case study projects. They used qualitative observational methods, and in some cases participant observation, to gather a range of data from English language learners.

Findings from individual presentations explore English language acquisition and teaching in a variety of contexts, across elementary and high school. Presenters will explain how theories of second language learning inform their learning about ESL and will offer examples of empirical data and linguistic analyses to explain the challenges and successes encountered by English language learners in our schools and society. Findings discuss issues of pronunciation, grammar, motivation and instructional strategies and their respective relationships to linguistically diverse students' English language learning and academic success.

All presenters are teacher candidates pursuing a K-12 endorsement in teaching English as a Second Language through the department of Hispanic Studies.

Ronan, Chelsea

Study of a Contemporary Leader

Presenters: Ronan, Chelsea

Undergraduate Presentation

Faculty sponsor: Clinebell, Sharon

Business Administration

Oral Presentation

Spruce B

03:20 - 03:35 in the Afternoon

This presentation will analyze the characteristics, traits and leadership style of a contemporary leader.

Rozner, Sarah

The Dynamic Visualization of Complex Variables: The Case of Ricardo

Presenters: Rozner, Sarah

Graduate Presentation

Faculty sponsor: Oehrtman, Michael

Mathematics

Oral Presentation

Columbine B

09:40 - 09:55 in the Morning

Quantitative reasoning combined with gestures, visual representations, or mental images has been at the center of much research in the field of mathematics education. In this research we extend these studies to include the arithmetic of complex numbers and the analysis of complex valued functions. Our data consists of videotaped interviews with experts, including mathematicians, physicists, and graduate students. Microethnography and phenomenological methods were used to analyze and interpret the data. In this case study we synthesize how one mathematician employs geometric representations, gestures, metaphor, diagrams, and models to describe his understanding of complex variables topics. Linear transformations were fundamental for this mathematician to connect analytical and geometrical representations. He expressed the Argand mapping as a real mapping with added symmetries. These findings may serve as a foundation for creating teaching experiments to help students develop geometrical representations of the mathematics behind complex variables.

Ruesgen, Ashley

Mexican American Ethnic Identity Development In Middle School Students

Presenters: Ruesgen, Ashley

Undergraduate Presentation

Faculty sponsor: Crow, Loree

Mexican American Studies

Poster Presentation

Mt Evans Ballroom

10:30 – 11:30 in the Morning

Being Mexican in the United States has broad ethnic identity implications. There are relatively few ethnic identity models that are “culture specific” and there are limited “culture specific” studies focusing on the impact of ethnic identity development in Mexican Americans. The impact that living in the

United States has on the development of Mexican American identity requires culturally accurate and methodical mixed methods research. Research is needed on middle-school aged children of Mexican heritage who are moving beyond pre-pubescence and who are beginning to experience the full-force pressure to adhere to the dominant American culture. It is in this age group that humans form their sense of identity and self-awareness. This research will generate a better understanding of the impact cultural socialization has on the ethnic identity of middle-school aged students of Mexican heritage in the United States.

Saad, Zabedah

Determining Components of the Expanded Core Curriculum (ECC) of Students with Visual Impairment from the NLTS2 data: An initial approach

Presenters: Saad, Zabedah

Graduate Presentation

Faculty sponsor: Ferrell, Kay

Applied Statistics & Research Methods, Special Education

Oral Presentation

Columbine B

11:40 - 11:55 in the Morning

The core curriculum for K-12 education addresses skills that all students, sighted or visually impaired, are expected to achieve by the time they graduate from high school. The opportunities for equality based on the Individuals with Disabilities Education Act (IDEA) and the No Child Left Behind Act provide an equal access for all students to receive the same curriculum. However, many believe that blind people learn differently from their sighted peers. In relation, Hatlen (1996) developed ECC that consists of nine components. This study was conducted to determine whether the NLTS data set will be able to identify the nine components of the ECC. Factor analysis procedure was administered and variables that explained each of the ECC components will also be discussed.

Sanchez, Danny

How Raunch Culture has been shaped by the History and Experience of women (for men's pleasure)

Presenters: Sanchez, Danny

Graduate Presentation

Faculty sponsor:

Sociology

Oral Presentation
Spruce A
02:20 - 02:55 in the Afternoon

This project theoretically analyzed and applied feminist theory to contemporary 2006-

2010 American feminine culture, also known as 'Raunch Culture.' First an analysis of Chandra Talpade Mohanty feminist theory "Sisterhood, Coalition, and the Politics of Experience," are laid out and described in conjunction with the descriptors of the new feminine culture that Ariel Levy describes in her book "Female Chauvinist Pigs: Women and the Rise of Raunch Culture." Secondly a historical look at the loss of power that women have had to men is analyzed and put into context to better help the reader understand how raunch culture came to fruition. And finally a probable solution to women, sex and sexuality is given, through the idea of remaculinizing men and male culture. Overall, it can be simply stated that the relationship between women and men and what is and should be considered pleasure is vastly different, & this paper looks at sociological viewpoints of this social feminist issue.

Sanchez, Lourdes

Effects of False-Evidence Ploys and Expert Testimony on Judge's Verdicts: Recommended Sentences, and Perceptions of Confession Evidence

Presenters: Sanchez, Lourdes
Undergraduate Presentation
Faculty sponsor: Woody, William
Psychology

Poster Presentation
Mt. Evans Ballroom
10:30 - 11:30 in the Morning

Abstract: Getting a suspect to confess is the goal of the interrogation process. Some of the commonly used techniques that are used today to reach that goal may result in false-confessions. Davis and Leo (2006) cite more than 300 cases of false confessions in literature while Drizen and Leo (2004) documented 125 cases of proven false-confession in the literature. This area of study is important because it can eliminate the number of innocent individuals who have implicated themselves in serious crimes. For this study, 537 judges in the Rocky Mountain region will be asked to complete a survey. The researchers are investigating the participants' perceptions of expert testimony, false-

evidence plays, and their recommended sentences if they find the suspect guilty. We hypothesize that judges will decrease sentences and verdicts because they are required to sentence fairly and using false-evidence plays and expert testimony shall not create biases in sentencing recommendations.

Scitern, Amber

Chux: Is an eco-friendly option a budget-friendly option?

Presenters: Scitern, Amber

Graduate Presentation

Faculty sponsor: Hummel, Faye

Nursing

Poster Presentation

Mt. Evans Ballroom

01:30 - 02:30 in the Afternoon

The purpose of these poster presentations is to validate how the Advanced Practice Nurse (APN) can make a difference in the cost of hospitalization or other health care services by collaborating with the patient, family, physician or other individuals or agencies. Eleven cost-benefit projects were conducted by Family Nurse Practitioner students in which a procedure, healthcare practice or product was evaluated. Recommendations for potential change or modification in procedure or policy are included.

Seidu, RoseMadodzi A.

Leptin and Estrogen Stimulate Endometrial Cancer Cell Proliferation through the Jak/Stat and ERK Signaling Pathways in Obese Persons

Presenters: Seidu, RoseMadodzi A.

Graduate Presentation

Faculty sponsor: Givray, Deborah

Public Health, Community Health, Education

Oral Presentation

Columbine A

09:00 - 09:35 in the Morning

Introduction: Obesity is the major public health concern associated with endometrial carcinoma (E.C.). Leptin a neuroendocrine hormone secreted by white adipose tissue plays an important role in cancer proliferation, invasion

and metastasis. Both leptin and estrogen act as mitogenic agents in the uterus, and stimulate the proliferation of endometrial cells. Obese women have higher levels of circulating estrogen (E2) and leptin and thus increased incidence of E.C. Therefore, understanding the mechanism of leptin and estrogen mitogenic action in obese women will be a landmark in E.C. prevention and treatment, and will potentially lead to endocrine therapies for hormone-dependent endometrial cancers. Methods: ER WT Ish cells routinely maintained in DMEM were plated into phenol red free DMEM +10% double charcoal stripped (DCC) FBS (full serum), phenol red free DMEM + 1% DCC FBS (low serum) for 8hours prior to steroid treatments. Cells were then starved, followed by treatment with E2, Leptin, E2 + Leptin at different time periods. The effect of the treatments on cell proliferation was examined by Western Immunoblotting using specific antibodies. Metabolic activity was analyzed using the cell proliferation reagent MTS-1 assay. Results showed clearly that E2, Leptin, and E2 + Leptin stimulated the ERK/MAPK pathway and induced phosphorylation of ERK/MAPK. The effect was maximum during the 5 minutes treatment time. However, the combination of E2 + Leptin did not further increase ERK activation (no increase in phospho-ERK signal compared to E2 or Leptin alone). E2, Leptin, and E2 + Leptin stimulated the growth of E.C. cells in a time dependent manner acting as mitogenic agents. Inhibition of ERK/MAPK and JAK/STAT pathways with specific chemical inhibitors (U0126 & AG490) blocked E2 and Leptin induced growth of EC cells.

Seidu, RoseMadodzi A.

Leptin and Estrogen Stimulate Endometrial Cancer Cell Proliferation through the Jak/Stat and ERK Signaling Pathways in Obese Persons

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Graduate Presentation

Faculty sponsor: Givray, Deborah

Public Health, Community Health, Education

Poster Presentation

Mt. Evans Ballroom

10:30 - 11:30 in the Morning

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levels of circulating estrogen (E2) and leptin and thus increased incidence of E.C. Therefore, understanding the mechanism of leptin and estrogen mitogenic action in obese women will be a landmark in E.C. prevention and treatment, and will potentially lead to endocrine therapies for hormone-dependent endometrial cancers. Methods: ER WT Ish cells routinely maintained in DMEM were plated into phenol red free DMEM +10% double charcoal stripped (DCC) FBS (full serum), phenol red free DMEM + 1% DCC FBS (low serum) for 8hours prior to steroid treatments. Cells were then starved, followed by treatment with E2, Leptin, E2 + Leptin at different time periods. The effect of the treatments on cell proliferation was examined by Western Immunoblotting using specific antibodies. Metabolic activity was analyzed using the cell proliferation reagent MTS-1 assay. Results showed clearly that E2, Leptin, and E2 + Leptin stimulated the ERK/MAPK pathway and induced phosphorylation of ERK/MAPK. The effect was maximum during the 5 minutes treatment time. However, the combination of E2 + Leptin did not further increase ERK activation (no increase in phospho-ERK signal compared to E2 or Leptin alone). E2, Leptin, and E2 + Leptin stimulated the growth of E.C. cells in a time dependent manner acting as mitogenic agents. Inhibition of ERK/MAPK and JAK/STAT pathways with specific chemical inhibitors (U0126 & AG490) blocked E2 and Leptin induced growth of EC cells.

Shiely, Robert

Computational Cluster Development For Scientific Use

Presenters: Shiely, Robert

Undergraduate Presentation

Faculty sponsor: Galovich, Cynthia

Physics

Poster Presentation

Mt. Evans Ballroom

01:30 - 02:30 in the Afternoon

The use of mathematical modeling and database searching in the sciences has grown drastically as the ability to compile databases and collaborate on computational algorithms over the Internet has improved. With this in mind, development of an on-campus computational cluster to aid with both current and future research has begun in the Physics Catacombs. The cluster being developed in the Catacombs utilizes Apple Inc's Xgrid software to dedicate agents to the grid controller and to distribute jobs once they have been submitted. Using Xgrid enables software development to focus primarily on the research being conducted and not on incorporating job distribution and grid management into code. The current goal of cluster development is to reach a

point at which job submissions can be made from any location on campus, using a simplified multi-platform Graphical User Interface to handle client-host connections. To date, the computational grid consists of 16 dedicated-agent computers tested at 41 gigahertz of combined computational speed, with the capability of running at 56 gigahertz.

Shuey, Mark

Native American Sports Mascots: A Symbol of Honor or a Form of Covert Racism?

Presenters: Shuey, Mark

Graduate Presentation

Faculty sponsor: Henderson, Angela

Sociology

Poster Presentation

Mt. Evans Ballroom

10:30 - 11:30 in the Morning

This poster presentation examines whether Native American mascots are a symbol of honor, or a form of covert racism? This presentation attempts to present this issue from an alternative perspective, namely the view of the Native Americans, and is therefore not an exercise in objectivity or subjectivity. It is a sociological attempt to identify how flawed micro-level social interaction can lead to the creation of detrimental stereotypes and negative perceptions, which are subsequently coerced upon a subordinate group. By utilizing Mead and his concepts related to Symbolic-Interactionism, this presentation examines how false coerced identities negatively impact Native Americans' sense of self worth. Additionally, sociological analysis was applied to historical events to determine how micro-level interaction between two culturally diverse groups become flawed to the point that a normative pattern developed which justified the genocide of Native American people. Furthermore, this presentation utilized Critical Theory to examine how the power elite within society use their ability to socially construct specific messages through a filtered presentation of history, media and films, and sports, to justify and legitimize the existing dominant ideology that produces the idea systems that guide our society. This conditioned message basically maintains and ensures their position of power by creating a mass society that is unaware they are victims of hegemony, this social reality perpetuates the status quo. Unfortunately, as it relates to Native Americans, the claim that mascots honor them is merely a societal opiate that disguises the fact that the ideas systems that led to the historical genocide of Native Americans are still very much in

place. The latent function of this societal ignorance is a hidden and alarming reality: A genocide is still occurring on many isolated reservations.

Siegel, Matthew

Trade in South East Asia

Presenters: Siegel, Matthew

Undergraduate Presentation

Faculty sponsor: Fong, Adam

History

Oral Presentation

Aspen C

03:40 - 03:55 in the Afternoon

This paper discusses trade between pre-modern Southeast Asia and China. From the Han to the Ming tributary missions between smaller nations and China regularly occurred. Southeast Asian nations used these missions to claim legitimacy as well as further their own economic growth. This paper argues that by participating in such trade networks Southeast Asian societies were not isolated primitive nations but rather were complex, cosmopolitan societies that participated in a far-reaching trade network extending throughout Eurasia. Relying on archeological evidence and Chinese historical records it is possible to reconstruct the connections between ancient societies. This paper contributes to scholarly discussions about the nature of pre-modern Asian societies, influence of trading networks, and development of international diplomacy.

Singletary, Stautcia

The Effects of Marijuana Use on College Students

Presenters: Singletary, Stautcia

Undergraduate Presentation

Faculty sponsor: Phillips, Kristina

Psychology

Poster Presentation

Mt. Evans Ballroom

10:30 - 11:30 in the Morning

Abstract: Marijuana use has been an increasing issue among college students (Buckner, Ecker, & Cohen, 2010). Previous research has shown that marijuana use can impair one's ability to perform well academically and may decrease a student's motivation for learning. The focus of this study will be on college students who use marijuana in the context of social facilitation, which has been associated with higher risk of problematic marijuana use. More research in this area may further understanding the use of marijuana on college campuses as well as some risks that may be associated with students' academic success. Participants will be screened, interviewed, and given several questionnaires regarding their marijuana use, academic performance and context of use. Participants will also participate in the Ecological Momentary Assessment (EMA), which measures marijuana use in "real time" (in the moment). It is hypothesized that heavy marijuana-using college students who use for social purposes will experience greater academic problems.

Smith, Jeff

Making Meaning of the Tenure Process

Presenters: Johnson, Lainey; Smith, Jeff; Weddington, Tim

Graduate Presentation

Faculty sponsor: Guido, Flo

Higher Education & Student Affairs Leadership

Poster Presentation

Mt. Evans Ballroom

01:30 - 02:30 in the Afternoon

The long-established process of tenure is a unique rite of passage to professional achievement and peer acceptance. It is lengthy, demanding, and, above all, has an outcome which has lasting effects throughout an academic career. From a hierarchical perspective, college faculty members are subject to assessment both from above (senior professors) and below (students). As a result, tenure-track professors experience higher levels of fear, anxiety, and stress than tenured faculty members or instructors not eligible for tenure. Despite this stress, new faculty members expend an enormous amount of energy learning the structural and social intricacies of higher education institutions during the transition to tenured status. However, as tenure-track professors gain experience, they encounter numerous challenges during the tenure process.

The purpose of this study is to explore how untenured tenure-track faculty make meaning of power differences during the pre-tenure process. The impact of the tenure process on the social and professional dynamics between tenured

and untenured faculty provide the context for discussion. While ample research exists on tenure, this narrative inquiry will provide an opportunity for readers to qualitatively consider the perspectives of untenured faculty and how the process affects their work, relationships, and roles. This study also establishes the opportunity for further research comparing the perceptions of specific faculty before and after the tenure process. Multiple interviews provide the benefit of both participant reflection and developing rapport that, we believe, will result in the most honest and candid responses. Further, we will use loosely structured, open-ended questions that maximize participant opportunity for natural, emergent expression while minimizing our influences on participant response.

Spencer, Bryden

Profiles of Engagement: An Investigation of Transformative Learning Experiences

Presenters: Spencer, Bryden; Pugh, Kevin; Russell, Cassandra
Graduate and Faculty Presentation Presentation

Faculty sponsor: Pugh, Kevin
Educational Psychology

Poster Presentation
Mt. Evans Ballroom
01:30 - 02:30 in the Afternoon

To foster transformative learning, we first need to identify and understand patterns of engagement that encompass the transformational aspects. The current study used cluster analysis within the framework of transformative experience to develop profiles of engagement. Specifically, 65 middle school students were interviewed and the three characteristics of transformative experience (motivated use, expansion of perception, and experiential value) were used as clustering variables. Three main clusters (low, medium, and high) and seven subclusters of students were identified. Profiles of these clusters and subclusters are presented in the paper. Students in clusters representing higher levels of transformative engagement performed significantly better on a learning assessment related to the content taught.

Stewart, Mindy

Voice Your Health – Determining elementary school students perceived “hinders” and “helpers” to leading a healthy lifestyle

Presenters: Stewart, Mindy
Undergraduate Presentation

Faculty sponsor: Clark, Alena
Dietetics, Nutrition

Research Excellence Award Finalist

Oral Presentation

Council Room

01:20 - 01:35 in the Afternoon

Purpose: Research demonstrates that the quality of a person’s diet as well as the level of physical activity greatly influences the likelihood of that person being overweight. Healthful life habits are formed during childhood. Childhood overweight and obesity increase the risk of hyperlipidemia, hypertension, insulin resistance, and respiratory problems. Due to the serious problems associated with these disease states, it is critical to prevent or decrease the rate of childhood overweight and obesity. This project sought to discover the barriers children perceive are preventing them from being healthy and what they believe is healthy with a goal to increase health and nutrition awareness and increase healthy behaviors.

Methodology: Children were recruited through the Evans Recreation Center. Four elementary students participated in the qualitative study. Using the Photovoice technique, the children took pictures over a 7 day period of anything they felt was harming or helping them become healthy. Each participant chose one picture that represented what was harming their health and what was helping their health and answered the questions: What is seen here, What is really Happening, How does this relate to our lives, Why are things this way, How could this image educate people, and What can I do about it?

Conclusion: Through an open discussion with the participants regarding their photos, the children identified playing with their friends, exercise, and eating fruits and vegetables as things that help them be healthy. Watching TV, sitting on the couch, not being careful or safe, and eating chocolate were determined to be harming the participants’ health. The children all stated they enjoy activities and learning to make healthy snacks. The information provided a helpful insight into what children themselves feel is important. The results of this study were used to plan a nutrition and health intervention occurring during spring 2011.

Stewart, Rebecca

The Great Recession: Economic Downturn and the Consumer Behavior of Professional Sports Fans

Presenters: Stewart, Rebecca; Burakowski, Katharine
Graduate Presentation

Faculty sponsor: Gray, Dianna
Sport & Exercise Science

Poster Presentation

Mt. Evans Ballroom

01:30 - 02:30 in the Afternoon

The current study is concerned with understanding how the current economic recession in the United States has affected the consumer behavior of fans of professional sport. Despite declining ticket sales, anecdotally it appears that the fan behavior has not been altered much due to economic concern. Possible explanations for this could be a fan desire to escape everyday life and a general desire for entertainment.

The conundrum for sport marketers is that there is no empirical evidence that links the struggling economy with a change in consumer behavior of professional sport spectators. The literature has reflected changes in purchasing behavior that fulfills basic needs like food (Bohlen et al., 2010; Hamilton, 2009; Kay, 2010; Tillotson, 2009a; Tillotson, 2009b; Tillotson, 2009c), but nothing has been written about discretionary spending for professional sport spectatorship. It would be logical to assume that professional sport organizations are witnessing changes in fan consumer behavior considering the evidence seen with spending on need-based products. Professional sport organizations are also experiencing a decrease in ticket sales as of late (Sutton, 2010), but it is yet unknown the cause(s) of this trend. The aim of this study is to explore the possibility of a relationship between the economic downturn and changes in consumer behavior of professional sport fans.

Stolzberg, Matthew

Designing a Polymer-Bound Halogenating Agent for Green Chemistry Applications to Chemical and Pharmaceutical Processes

Presenters: Stolzberg, Matthew
Undergraduate Presentation

Faculty sponsor: Ruane, Michael
Chemistry

Poster Presentation

Mt. Evans Ballroom
12:00 - 01:00 PM

The normal reagents for transforming alcohols into halides are thionyl chloride and phosphorus tribromide. Both of the reagents are relatively cheap, but both reagents are liquids and are often added in excess. Additionally, the reactions must be done at reflux, limiting the scope of the reagent as compounds may decompose while heating. Also, the chlorinating agent must then be removed by chromatography, distillation or other means. Lambert showed that a chlorinated 1,2-diphenylcyclopropanone acts as thionyl chloride. It is our contention that a similar compound, called DCX-1, does the same transformation using a cheaper reagent. Binding the material to a polymer backbone creates a transformative material that can be filtered off after the reaction. DCX-1 can then be regenerated, "greening" the purification process by removing the need for purification reagents and reducing the costs in industrial processes. Our current research shows that primary, secondary and tertiary alcohols can be transformed using this process. DCX may also convert chiral alcohols to chiral halides. Having a compound which can do chiral inversions and transformation into a leaving group is of interest to pharmaceutical companies. A simple, efficient purification increases overall yields. Preliminary results show the retention of chirality using a polarimeter.

Terry, Alexander

ETHANOL INHIBITS J1 MOUSE EMBRYONIC STEM CELL DIFFERENTIATION INTO CARDIOMYOCYTES

Presenters: Terry, Alexander

Undergraduate Presentation

Faculty sponsor: DeKrey, Gregory

Biological Sciences

School of Biology Poster Presentation

Mt. Evans Ballroom

12:00 - 01:00 PM

Estimates suggest that 30%-50% of human embryos are lost during the preimplantation stage of development. Exposure to ethanol during the post-implantation phase has been well documented to cause developmental abnormalities. By contrast, the impact of ethanol exposure during the preimplantation phase on embryo survival or development is less clear. A better understanding of the risks of ethanol exposure during the preimplantation period is needed because mothers would not know they are

pregnant and they would be less likely to practice the ethanol avoidance that is typically recommended of pregnant women. The inner cell mass (ICM) of preimplantation embryos is the source of embryonic stem (ES) cells, and ES cells were used in this study as an alternative to the use of animals for testing the effects of ethanol. Previous studies in this laboratory using mouse D3 ES cells found significant cytotoxicity ($p < 0.05$) after 10 days of ethanol exposure at concentrations greater than 0.5%. At lower concentrations, ethanol was found to significantly ($p < 0.05$) inhibit differentiation of ES cells into cardiomyocytes with a 50% inhibitory concentration (IC50) value of 0.35%, a physiologically relevant exposure level. In the present study, a different mouse ES cell line (J1) was used to determine whether previous observations were unique to the D3 line or if they indicated a general phenomenon of ethanol exposure in mouse ES cells. Preliminary results demonstrated an approximate 70% inhibition of J1 ES cell differentiation into cardiomyocytes when exposed to ethanol at 0.5%. These results suggest that ICM cells may suffer altered development when exposed to low levels of ethanol.

Thomas, Denise

History that moved the Earth - from Babylon to Einstein

Presenters: Thomas, Denise

Graduate Presentation

Faculty sponsor: Szczyrba, Igor

Educational Mathematics

Oral Presentation

Columbine B

10:00 - 10:55 in the Morning

The evolution of human understanding of our universe is presented beginning with Babylonian beliefs to the modern theory of general relativity. Emphasis is given to discoveries made by such individuals as Ptolemy, Copernicus, Kepler, Galileo, Newton, and Einstein.

VanKorlaar, Mary

Many voices, many lives: A discussion on various ways of implementing autoethnography

Presenters: Bean, Heather; Cullen-Reavill, Marilyn; Reavill, David; VanKorlaar, Mary

Graduate Presentation

Faculty sponsor: Lahman, Maria
Applied Statistics & Research Methods, Counseling Psychology, School Psychology

Oral Presentation
Columbine B
03:20 - 03:55 in the Afternoon

The panelists will present an overview of autoethnography as a methodology in social science research, followed by examples of current research projects using various approaches to autoethnography. Because these projects are still in progress, this presentation will focus more on various methodological concepts and approaches than on research findings.

An example of multi-voiced ethnography explores the perspectives of a teen with cognitive disabilities through interviews with the teen, her mother, and other family members, as well as photos, artifacts and documents. Various power differentials between the researcher/ participant, adult/teen, parent/child, and around issues of ability/disability, are addressed to ensure genuine representation of the participant's voice.

Another panelist's research explores the overlap and separateness of the philosophical foundations of two distinct methodologies: autoethnography and artography. Artography is an arts-based methodology which combines one's teaching knowledge and artistic practices with one's research. This study describes how looking at oneself through autoethnography simultaneously through art, research, and teaching aids one in exploring who they are and why it matters.

Evocative autoethnography is used within a larger phenomenological study on stay-at-home mothers and their experiences as their children transition into full-time school attendance. Evocative ethnography focuses on the lived experience of the researcher, as phenomenology focuses on the lived experience of the participants. The researcher will explore the meaning of her own experiences as a stay-at-home mother in order to relate them to her understanding of participants' experiences.

Our last panelist will present critical autoethnography describing the lived experiences from the perspective of inclusive membership as student with learning "difficulties". He will describe the barriers, resiliencies, and natural support systems for myself through three generations of family using the creative narrative writing style of the epic poetic tale.

Vicek, Brienna

Technically Art: An Exploration Through the Fine Art of Theatrical Scenic Design and its Evolution and Development into a Performing and Collaborative Art

Presenters: Vicek, Brienna
Undergraduate Presentation
Faculty sponsor: Schuttler, Mary
Art & Design, Theatre Arts

Oral Presentation
Aspen B
11:00 - 11:35 in the Morning

At what point in the artistic process does the scenic designer move beyond their own vision and into a world of collaboration? At what point does the qualitative name of the art change from fine art to performing art? From the viewpoint of the fine arts involvement in the performing arts, *Technically Art* explores the scenic design process in theatre. Considering the function of the scenic designer in the overall collaborative process that is theatre, an examination is made of the designer's development through the creative process from its fine arts beginning to the final, collaborative result.

Research includes both the personal experience of the author as a double major at the University of Northern Colorado and extensive academic research into the creative design process. As both a scenic designer and studio painter, the author gives a detailed examination of the different steps of the design process; who is, or should be, involved, and how this affects the designer and the final outcome of the design. This is coupled with how these steps have been used, evolved and changed for the author in her undergraduate experience in developing a personal design process. This project includes the journey of the author's design work through five realized university productions.

The little known scenic design by Picasso for *Parade* in 1915, as one of many examples, begins to bridge the controversy between the disciplines of performing and visual arts. The debate of what is legitimate art, argued by both academics and critics becomes moot because of the input of the design team, the individual designer and all the compromises made through collaboration to put up the show. It all comes down to the technical details of where the work of the individual designer, the artist, can be seen when the curtain goes up.

Waite, Kristin

Leadership and Innovation

Presenters: Waite, Kristin

Undergraduate Presentation

Faculty sponsor: Clinebell, Sharon

Business Administration

Oral Presentation

Aspen C

11:20 - 11:35 in the Morning

This presentation focuses on the leadership skills and qualities necessary to foster innovation in a company. 3M is well-known for innovation and this company will be used to illustrate the leadership skills and qualities that are needed to create and nurture a culture of innovation.

Walker, Richelle

Disordered Eating Among Female Collegiate Athletics: Athletic Identity, Perceived Sport Competence, and Self-Esteem

Presenters: Walker, Richelle

Graduate Presentation

Faculty sponsor: O'Halloran, Sean

Counseling Psychology

Oral Presentation

Aspen C

10:20 - 10:35 in the Morning

Eating disturbances are a significant problem and a growing concern among female athletes. Over the last two decades, research has suggested that female athletes are an at-risk group for developing disordered eating behaviors and maladaptive attitudes about food and weight (Hausenblas & Carron, 2002; Johnson, Powers, & Dick, 1999; Sundgot-Borgen, 1994). Researchers have sought to understand the role that athletic participation plays in the development of disordered eating behaviors and attitudes (Chopak & Taylor-Nicholson, 1991). Significant variables include social influence, performance anxiety, self-appraisals related to success in sport (Williamson et al., 1995), the role of exercise and physical activity (Epling & Pierce, 1988), the type of sport (Berry & Howe, 2000; Smolak, Murnen, & Ruble, 2000), intra-individual characteristics of athletes (Johnson, 1994; Leung, Geller, & Katzman, 1996), competition level (Heffner, Ogles, Gold, Mardsen, & Johnson, 2003), and the role of coaches (Berry & Howe, 2000; Price & Weiss, 2000). While these

factors indicate a significant relationship between disordered eating and athletes, none fully explain the phenomenon. This study adds to this body of research by examining how three additional constructs, athletic identity, self-esteem, and perceived sport competence, relate to disordered eating behaviors and attitudes among female athletes. Female athletes (N = 84) completed self-report questionnaires on the variables of interest. A regression analysis indicated that these variables together explained a significant amount (13.1%) of the variance in disordered eating behaviors and attitudes. While perceived sport competence was not a significant predictor, strong athletic identity and low self-esteem were significant predictors. These results initiate a greater understanding of the effect athletic identity and self-esteem have on disordered eating practice among female college athletes.

Walsh, Jennifer

Music as a Memory Tool in the Secondary Spanish Classroom

Presenters: Walsh, Jennifer

Undergraduate Presentation

Faculty sponsor: Romero, Deborah

Educational Studies, Foreign Languages, Spanish

Oral Presentation

Aspen B

10:00 - 10:15 in the Morning

A popular theory of teaching foreign language is the Communicative Language Teaching method. In this method, communication is the key to teaching the target language. This study examines the differences of using a song and conversation teaching method in two secondary Spanish 1 classrooms to increase vocabulary retention and verb conjugation production. During two interventions, the two study groups took a pre-test, received the instruction, recapped the instruction, and then took a post-test. The data from the two study groups were analyzed to determine if there was any significant difference between the song and conversation treatments. No significant difference was found between the two groups; however, there was a significant difference between the pre- and post-tests for both groups. These results suggest that using song and conversation in the Spanish classroom both have a significant effect on student learning of vocabulary and verb conjugations.

Walters, Meag-gan

Demystifying Homelessness: A Phenomenological Approach to Understanding Living Without a Home

Presenters: Walters, Meag-gan

Graduate Presentation

Faculty sponsor: Rue, Lisa

Counseling Psychology, Psychology, Sociology

Oral Presentation

Spruce B

02:00 - 02:15 in the Afternoon

The purpose of this qualitative research is to illustrate the multifaceted life stories and experiences of the homeless in Greeley, Colorado. This study aims to highlight the humanity of this population and possibly dispel misconceptions by giving these individuals a platform to speak for themselves. Homelessness for the purpose of this study was defined as the state of needing to seek shelter for lodging for the duration of at least one night. A series of semi-structured interviews were conducted with five male residents of the Guadalupe Shelter in Greeley, Colorado. All of the interviews were transcribed, coded and themes were organized according to Moustakas, 1994 data analysis for phenomenological studies. Individual narratives revealed commonalities across particular experiences that may speak to an overarching understanding of the experience of homelessness. Data analysis identified the two primary themes as factors under perceived internal and external control. A total of ten sub-themes fit within these categories. Under factors of internal control are: optimism, reasons for change, views of family and the self, the desire to work, altruism, and innovation. External control was exemplified by the following sub-themes: spirituality, infractions with the law and exploitation by the systems that are supposed to help. The final theme of drug abuse did not consistently fit into either category. Implications for awareness and activism through social justice and policy change are discussed as well as areas for future research.

Walters, Meag-gan

Tourette's Syndrome in the Family: The Parents' Experiences

Presenters: Walters, Meag-gan

Graduate Presentation

Faculty sponsor: O'Halloran, Sean

Counseling Psychology

Poster Presentation

Mt. Evans Ballroom

01:30 - 02:30 in the Afternoon

Few studies have examined the impact of Tourette's syndrome (TS) on the lives of parents and caregivers of children with TS. This study used qualitative research methodology to examine the experiences and challenges presented by TS in the family and how parents coped. The results of this study contribute descriptive information about the process of living with and adjusting to Tourette's syndrome in the family. Parenting stress was measured for descriptive purposes using Abidin's Parenting Stress Index (PSI). Ten caregivers of children with TS from five families were interviewed. Narratives were developed for each family from the interview data. Furthermore, data analysis revealed 11 themes and several subthemes that exemplify areas of impact and coping methods. The emergence of symptoms prior to diagnosis was a time period characterized by comparisons, confusion, and concern, and the pursuit of answers. In the aftermath of the diagnosis, parents experienced various emotional reactions as they faced the potential implications of the syndrome. Furthermore, there was some indication that relationships were altered due to the presence of TS. Parents described various emotion-focused and problem-focused coping strategies to help manage the syndrome. The results of the PSI confirmed that TS in the family contributes to high levels of parenting stress. For most parents, parenting stress was primarily associated with characteristics of the child, such as demandingness, mood, and poor adaptability. The implications for practice are discussed.

Washington, Shanece

The McGurk Effect

Presenters: Washington, Shanece

Undergraduate Presentation

Faculty sponsor: Finan, Donald

Audiology & speech-language sciences

Poster Presentation

Mt. Evans Ballroom

10:30 - 11:30 in the Morning

The McGurk Effect is an observable phenomenon that illustrates the interaction of how what one sees influences their auditory system. The McGurk Effect shows that visual articulatory information is assimilated into our perception of speech automatically and unconsciously. In this study, 20 graduate students, in that masters speech and/or audiology program at the University of Northern Colorado, will be surveyed on their perception of what is heard when the effect is administered. My hypothesis is that the speech

pathology students will perform higher at hearing what is actually said than audiology graduate students. Previous research has examined that neither race nor gender are factors in how the effect influences hearing. Through this study, researchers may gain an understanding of whether the varying training concerning speech disfluencies influences how speech is perceived.

Weiderspon, Jessica

Normalization of Cardiovascular Fitness in Cancer Survivors Following an Exercise Intervention

Presenters: Weiderspon, Jessica
Graduate Presentation

Faculty sponsor: Schneider, Carole
Sport & Exercise Science

Poster Presentation
Mt. Evans Ballroom
10:30 - 11:30 in the Morning

Research has consistently shown that exercise improves cardiovascular function in cancer survivors. However, this improvement has yet to be compared against the general population. **PURPOSE:** To evaluate cardiovascular fitness pre and post exercise intervention in cancer survivors against the normative data for a cancer population and the general US population. A secondary purpose was to compare the percent change in cardiovascular fitness in cancer survivors to that of an apparently healthy population. **METHODS:** Exercise treadmill test performance was evaluated in a cancer population of 543 subjects. Normal distributions for VO₂ peak and treadmill time (Bruce protocol) were created for the cancer population at baseline (intake) and following a 3 or 6-month exercise intervention. Cardiovascular values for ten age and gender groups were compared against the normative classifications of a cancer population and the general US population according to ACSM norms. **RESULTS:** Four age groups improved in cardiovascular classification when evaluated with the US population norms. All but one age group improved its cardiovascular classification when evaluated with cancer population norms. Average VO₂ peak values improved from $21.6 \pm 6.3 \text{ mL} \cdot \text{kg}^{-1} \cdot \text{min}^{-1}$ to $24.84 \pm 6.18 \text{ mL} \cdot \text{kg}^{-1} \cdot \text{min}^{-1}$. This 15% improvement mirrored the increase in aerobic capacity seen in healthy individuals following a similar exercise intervention. Mean treadmill time improved from $5:52 \pm 2:38$ minutes to $7:09 \pm 2:22$ minutes. **CONCLUSION:** Although all age groups remained in a “very poor or poor” classification based upon US norms, when evaluated using cancer specific norms the data indicated substantial improvement. These improvements

parallel the response seen in healthy individuals. This emphasizes the importance of cancer specific normative data.

Welch, Melissa

Diminishing Differences Through Horsemanship

Presenters: Welch, Melissa

Undergraduate Presentation

Faculty sponsor: Houser, Jeffrey

Sociology

Poster Presentation

Mt. Evans Ballroom

01:30 - 02:30 in the Afternoon

Hearts and Horses Therapeutic Riding Center in Loveland, Colorado is a nonprofit organization providing a dynamic range of equine facilitated therapeutic services to adults and children with disabilities in Northern Colorado. The organization holds a premiere accreditation from the North American Riding for the Handicapped Association (NARHA), and works diligently within the community to promote awareness regarding diversity, and acceptance. This summer Hearts and Horses will offer two weeks of all abilities horsemanship camp. Bringing together children with and without disabilities, all abilities weeks are an exciting opportunity for campers to explore and celebrate their differences, while learning the importance of diversity, compassion, and respect. Sessions will be led by NARHA certified instructors who are equipped to work with a wide variety of special needs. I will examine the effects of an integrated camp environment on the stigmas attached to emotional, cognitive, and physical disabilities within the following populations: parents of children with disabilities, parents of children without disabilities, children with disabilities, and children without disabilities. Pre and post test data will be used to determine the direction and magnitude of any and all shifts in attitudes and perceptions regarding disability. It is expected that the integrated camp setting will reduce negative stigmas about disabilities for non-disabled campers and their parents, while increasing self-esteem and validation in disabled campers and their parents.

Wells, Samantha

Transitioning to Postsecondary Institutions for Individuals with Identified Disabilities: The Supports and Barriers of High School

Presenters: Wells, Samantha
Undergraduate Presentation
Faculty sponsor: Bassett, Diane
Special Education

Poster Presentation
Mt. Evans Ballroom
10:30 - 11:30 in the Morning

Individuals who have a disability are less likely to enroll in or complete college because they may be under prepared to enter college (Kochhar-Bryant, Bassett and Webb, 2009). It is important for special educators to know how they can help individuals with disabilities achieve their goals of continuing on to postsecondary institutions. According to the National Longitudinal Transition Study only three in ten individuals with disabilities attends college (Newman, L. 2000). Research is needed to determine what can assist individuals with disabilities to succeed in postsecondary institutions. In the present study, participants will be asked to complete an online survey regarding which techniques, accommodations and classes would help them to succeed. Individuals who express interest after completing an online survey will be asked if they wish to be considered for a face-to-face interview. Through these research findings, postsecondary institutions will have information on how to increase the enrollment rate of individuals with disabilities and help these students succeed.

Wills, Holly

Game On! Experiential, Place-Based Education Meets Leadership Development: Senior Capstone Class Creates Video Game for Freshmen Leadership Students

Presenters: Ellis, Jessica; Dilldine, Clarissa; Endres, Kellsie; Gosch, Daniel; Grove, Elizabeth; Morfitt, Sara; Wills, Holly
Graduate and Undergraduate Presentation Presentation
Faculty sponsor: Rohloff, Catherine

Poster Presentation
Mt. Evans Ballroom
01:30 - 02:30 in the Afternoon

This project has been created by members of the capstone class of the President's Leadership Program. It begins with a brief description of place-based education and highlights the potential application of this method of learning while building a community around the university. We created this

project using Augmented Reality for Interactive Storytelling (ARIS) to customize our own place-based learning experience for the campus community. ARIS is an interactive tool which allows users to make mobile games, tours and stories. ARIS players experience a virtual world of complex characters, items and media placed in physical space. Our game throws the player into an enticing adventure of mistaken identities, competing interests, and intrigue. We created a fictional story which guides the player through a series of twisted events on the UNC campus intertwined with controversial issues surrounding water rights in Colorado. The player must apply critical thinking, active learning, and exploration in order to investigate the disappearance of a fictional university professor. The player virtually solves the mystery while physically touring the UNC campus. This method allows students to actively participate in the game while becoming familiar with the campus and surrounding community. In order to conduct this project, we researched the impact of place-based education as well as learned to use ARIS and create a connection between the two. It is our hopes that this interactive tool will be used in the future to enhance the experience of prospective UNC students.

Woods, Maurice

A Novel Way to Measure the Distance to an Asteroid

Presenters: McDonald, James; Nolen, Hunter; Riggle, Travis; Woods, Maurice

Undergraduate Presentation

Faculty sponsor: Dietz, Richard

Physics

Poster Presentation

Mt. Evans Ballroom

01:30 - 02:30 in the Afternoon

We have successfully measured the distance between the Earth and a main belt asteroid, 298 Baptistina. We used remotely operated telescopes in New Mexico and Spain to take simultaneous images of the asteroid. The position of the asteroid with respect to the background stars was slightly different in the two images, and application of the method of parallax to the images enabled an accurate determination of the distance to the asteroid.

Woods, Maurice

The Reentry Experiment SAT-X

Presenters: Adamson, Aaron; Aken, Jordan; Honda, Motoaki; Kuhns, Casey; Shiely, Robert; Woods, Maurice

Graduate and Undergraduate Presentation Presentation

Faculty sponsor: Walch, Robert
Physics

Poster Presentation
Mt. Evans Ballroom
01:30 - 02:30 in the Afternoon

“What goes up must come down”; an old adage that, despite being rather cliché, holds great merit. Take for example the Space Shuttle, a craft that instills the idea of flight to new heights in the minds of those who know of its capabilities. However it is not often that one may consider the fact that it must, at some point, return to Earth. The challenge of entering, or reentering, the Earth’s atmosphere is not new. For years NASA has successfully designed vessels that have endured the harsh process of reentry, but in most cases this is due only to the act of over-engineering; designing to withstand conditions far beyond what is expect to be encountered and moving on to concentrate on other objectives.

Though this method proves to be effective, consider the benefit of knowing exactly what to expect. The Reentry Experiment SAT-X (ReX) project is designed to shed light on the challenging process of atmospheric reentry, and provide test data that will help to remove our dependency on the default that is over-engineering.

As the test will be conducted using a small reentry capsule prototype that will be jettisoned at apogee from a sounding rocket (launched at Wallops Flight Facility in Virginia and funded by the Colorado Space Grant Consortium), the flight will test the capability of the prototype capsule as a platform for future reentry experiments, a secondary objective to the ReX mission.

Ybarra, Richard

Hybrid Cultures and the U.S.-Mexico Borderlands

Presenters: Maxey, Kelsey; McCullough, Amy; Ybarra, Richard

Undergraduate Presentation

Faculty sponsor: Park, Jungwon
Spanish

Oral Presentation
Spruce A
11:20 - 11:35 in the Morning

This panel explores the meaning of hybrid culture and the way it has become the most powerful discourse in defining the U.S.-Mexico border during last 20 years. By analyzing artistic representations in novels and films, these papers discuss the validity of this theory in the current, more intensified border context. The papers will be presented in Spanish.