Graduate Research Symposium:
Showcasing Scholarly & Creative Works

IDAHO STATE UNIVERSITY

2018

MARCH 9, FRIDAY
3:00 PM - 7:00PM
3 MINUTE THESIS PRESENTATIONS
ORAL PRESENTATIONS
POSTER & CREATIVE WORKS DISPLAYS

MARCH 10, SATURDAY
8:30 AM - 2:30 PM
ORAL PRESENTATIONS
POSTER PRESENTATIONS & CREATIVE WORKS
AWARDS CEREMONY

discover OPPORTUNITY
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<td>Catherine M. Millett, PH.D.</td>
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# AGENDA

**FRIDAY, MARCH 9, 2018**

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<tbody>
<tr>
<td>Graduate Student Association Event</td>
<td>2:00 PM – 3:00 PM</td>
<td>Clearwater, PSUB</td>
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<tr>
<td>3 Minute Thesis (3MT) Presentations</td>
<td>3:00 PM - 4:40 PM</td>
<td>Ballroom, PSUB</td>
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<tr>
<td>Oral Presentations: Part I</td>
<td>4:45 PM – 7:00 PM</td>
<td>Salmon River Suites, PSUB</td>
</tr>
<tr>
<td>Biological &amp; Natural Sciences</td>
<td>4:45 PM – 7:00 PM</td>
<td>North Fork</td>
</tr>
<tr>
<td>Humanities, Behavioral &amp; Social Sciences (Group A)</td>
<td>4:45 PM - 6:30 PM</td>
<td>Middle Fork</td>
</tr>
<tr>
<td>Humanities, Behavioral &amp; Social Sciences (Group B)</td>
<td>4:45 PM - 6:30 PM</td>
<td>South Fork</td>
</tr>
<tr>
<td>Poster Displays</td>
<td>2:00 PM – 7:00 PM</td>
<td>Ballroom, PSUB</td>
</tr>
<tr>
<td>Creative Works Displays</td>
<td>2:00 PM– 7:00 PM</td>
<td>Ballroom, PSUB</td>
</tr>
<tr>
<td>Event</td>
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<tr>
<td>Oral Presentations: Part II</td>
<td>8:30 AM – 10:00 AM</td>
<td>Salmon River Suites, PSUB</td>
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<tr>
<td>Humanities, Behavioral &amp; Social Sciences (Group C)</td>
<td>8:30 AM – 10:00 AM</td>
<td>North Fork</td>
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<tr>
<td>Engineering, Physical &amp; Mathematical Sciences</td>
<td>8:30 AM – 10:00 AM</td>
<td>Middle Fork</td>
</tr>
<tr>
<td>Business, Economics &amp; Public Administration</td>
<td>8:30 AM - 9:45 AM</td>
<td>South Fork</td>
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<tr>
<td>Education, Learning &amp; Training</td>
<td>8:30 AM - 9:45 AM</td>
<td>South Fork</td>
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<tr>
<td>Poster Presentations &amp; Creative Works</td>
<td>10:15 AM - 12:15 PM</td>
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<tr>
<td>Keynote Speaker Luncheon</td>
<td>12:15 PM - 1:45 PM</td>
<td>Ballroom, PSUB</td>
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<tr>
<td>Dr. Catherine M. Millett</td>
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<td>Presenting: The Wonderful World of Graduate School in Rural Communities: Preparing for a Life of Teaching, Research and Service to Address Local and Global Issues</td>
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<tr>
<td>Awards Ceremony</td>
<td>2:00 PM - 2:30 PM</td>
<td>Ballroom, PSUB</td>
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Dr. Catherine Millett is a senior research scientist in the Policy Evaluation and Research Center at ETS. Her research focuses on the factors leading to postsecondary readiness, access, success and completion for first generation, low-income, and minority students. She is the Chair of the Global Access to Postsecondary (GAPS) Executive Committee.

Dr. Millett has led four major evaluations focused on postsecondary readiness, access, success and completion. One project funded by the Robert Wood Johnson Foundation was the evaluation of the “New Careers in Nursing” Program conducted by the American Association of Colleges of Nursing (AACN). This program focused on expanding opportunities in nursing through accelerated second bachelor’s degree programs. Another projected, funded by Princeton University, examined Princeton University Preparatory Program’s (PUPP) work with local public high school students to prepare for selective college admissions and success. A third project funded through the U.S. Department of Education’s Investing in Innovation (i3) grant was the evaluation of “The Gaining Options for College Collaborative” program which worked with public high school students in Erie, PA and Louisville, KY to prepare them for college admissions. For a decade, she co-led the evaluation of the Goldman Sachs Foundation’s Signature Initiative “Developing High-Potential Youth” which sought to prepare students for selective universities in the United States, Ireland, England and South Africa.
Dr. Millett has a strong interest in graduate education particularly at the doctoral level. She is co-author of the book *Three Magic Letters: Getting to Ph.D.*, which is based on a research study of over 9,000 doctoral students at 21 universities.

Dr. Millett directed the “Addressing Achievement Gaps” symposium series for ETS. Her last event was “Promoting Promising Practices for Black Male Success,” a four-part series, with the Children’s Defense Fund in Washington, DC that examined the factors contributing to and inhibiting the academic achievement of Black boys and young men.

Millett is a member of the Millhill Child & Family Development Center Corporation Board of Trustees located in Trenton, NJ and Princeton Family YMCA Board of Directors located in Princeton, New Jersey.

“I benefited by being able to present on my research and practice for future talks for my department and at discipline-specific conferences.”
PARTICIPANT LIST

COLLEGE OF ARTS & LETTERS

**Anthropology**
Kiley Heaps (Anthropology, MS)
Morgan McKenna (Anthropology, MS)

**Art**
Nikyra Capson (Art, MFA)
Tirazheh Eslami (Art, MFA)
Rachael Mayer (Art, MFA)
Joseph Pehrson (Art, MFA)

**Communication, Media & Persuasion**
Elisa Johnson (Communication, MA)

**English & Philosophy**
Sarah Garelik (English & Teaching of English, PhD)
Wonjeong Kim (English & Teaching of English, PhD)
Katherine Merrill (English, MA)
Richard Samuelson (English & Teaching of English, PhD)
Ryan Tallmon (English, MA)
Emily Treasure (English & Teaching of English, PhD)
Paul Williams (English, MA)

**Global Studies & Languages**
Sadie Stoddard (Spanish for Health Professions, Cert)

**History**
David Peterson (Historical Resource Management, MA)

**Political Science**
Volkan Aktas (Political Science, MPA)
Chris Brown (Political Science, DA)
Misty Clover Prigent (Political Science, DA)
Jill Kirkham (Political Science, DA)
James Pascali (Political Science, MA)
Chadwick Pearsall (Political Science, DA)
Braedon Udy (Political Science, MPA)
Bea Valencia (Political Science, MPA)

Psychology
Aimee Bozeman (Experimental Psychology, PhD)
Kellie Brown (Experimental Psychology, PhD)
Douglas Colman (Experimental Psychology, PhD)
Elizabeth Craun (Clinical Psychology, PhD)
Danielle Cummings (Clinical Psychology, PhD)
Reinalyn Echon (Experimental Psychology, PhD)
Jonathan Goode (Clinical Psychology, PhD)
Sheherezade Krzyzaniak (Experimental Psychology, PhD)
Yaeeun Lee (Clinical Psychology, PhD)
Erin Madison (Experimental Psychology, PhD)
Jennifer McDonald (Experimental Psychology, PhD)
Ahva Mozafari (Clinical Psychology, PhD)
Charles Parker (Experimental Psychology, PhD)
Bailey Perschon (Experimental Psychology, PhD)
Luis Rodriguez (Clinical Psychology, PhD)
Kathleen Smith (Clinical Psychology, PhD)
Hillary Swann (Experimental Psychology, PhD)
Barbara Wood Roberts (Experimental Psychology, PhD)

Sociology, Social Work and Criminology
Daniel Moody (Sociology, MA)
Jessica Sargent (Sociology, MA)

COLLEGE OF EDUCATION

School Psychology & Educational Leadership
Jonathan Lord (Educational Leadership, EdD)

Sport Science & Physical Education
Lindsey Anderson (Athletic Administration, MPE)
Brody Astle (Athletic Administration, MPE)
Michael Beseris (Athletic Administration, MPE)
Eric Eagleburger (Athletic Administration, MPE)
Claire Jorgensen (Athletic Administration, MPE)
Makayla Lundin (Athletic Administration, MPE)
Leila Riley (Athletic Administration, MPE)
Tyler Sebring (Athletic Administration, MPE)

COLEGE OF SCIENCE & ENGINEERING

Biological Sciences
Steven Augustine (Biology, MS)
Aurora Bayless-Edwards (Biology, MS)
Landon Bayless-Edwards (Biology, PhD)
Kayla Glossner (Biology, MS)
Carolyn Macek (Biology, MS)
Ruth MacNeille (Biology, DA)
Kshitij Shrestha (Biology, MS)
Sarah Stalder (Biology, MS)
Jessica Whitaker-Fornek (Biology, PhD)

Civil & Environmental Engineering
Maximilian Casanova (Civil Engineering, MS)
Utsa Rashique (Civil Engineering, MS)

Engineering & Applied Science
Abhijit Makhal (Engineering & Applied Science, PhD)

Geosciences
Carl Jurkowski (Geology, MS)
Ian Lauer (Geology, MS)
Graham Meese (Geology, MS)
Joseph Thomas (Geology, MS)
Katherine Wehrs (Geology, MS)

Mechanical Engineering
Nirmeet Adhvaryu (Measurement & Control Engineering, MS)
Muhammad Zunnun Ibna Mostafa Mahmud (Measurement & Control Engineering, MS)
Sabin Tandukar (Measurement & Control Engineering, MS)
Physics, Nuclear & Electrical Engineering
P. James Norris (Physics, MS)
Aaron Thompson (Nuclear Science & Engineering, PhD)

KASISKA DIVISION OF HEALTH SCIENCES

Communication Sciences & Disorders
Chelsey Andreasen (Speech Language Pathology, MS)
Lindsey Foss (Speech Language Pathology, MS)
Jerilyn Garrett (Speech Language Pathology, MS)
Brooke Johnson (Speech Language Pathology, MS)
Caryn Lake (Speech Language Pathology, MS)
Maryellen Mclain Verdoes (Audiology, AuD)
Jeanna Ritter (Speech Language Pathology, MS)
Carley Warren (Speech Language Pathology, MS)

Counseling
Jehan Hill (Counselor Education & Counseling, PhD)

Nursing
Tanna Woods (Nursing, PhD)

COLLEGE OF BUSINESS

Business
Hassan Afzal (Business Administration, MBA)

“[The Graduate Research Symposium] was a really great experience for me and my peers. I loved getting to see what other grad students are doing!”

2018 Graduate Research
2017 AWARDS

CREATIVE WORKS SESSION
Creative Works
Introducing Persian Culture to the West
Tirazheh Eslami

POSTER PRESENTATION SESSION
Adversity & Resilience
Suppression and Acceptance as Predictors for Physical Health among Incarcerated women.
Bailey Perschon, Bryn Kennel, Shelby Weber, Duyen Vo, Emily Konecky & Shannon Konecky

Complex Behavioral Systems
Differences in Caregiver Coping Style Effect Efficacy of Mindfulness-Based Interventions
Lucinda Scott

Habitats of Wildlife & Insects
History of Salmon: A story of Situk Lake, Yakutat, Alaksa
Carl Jurkowski & Bruce Finney

Health & Innovations
Improving The Chlamydia And Gonorrhea Screening Process Using The Shared Decision Making (SDM) Model
Mallory Miner

Historical Perspectives
"Everybody Has a Bungalow Hope": Housing and Occupation in the US West, 1920
Kristine Hunt

2018 Graduate Research
New Paradigms in Science & Engineering
Pre-irradiation Characterization of Nanocrystalline and Ultrafine Grained Austenitic Stainless Steel
Ishtiaque Robin, Andrew Hoffman, Malwina Chaczko, Ryan Carnahan, Dewen Hou & Haiming Hou

Plant Ecology & the Environment
Floods, Fences, and Fine Sediment: Building the historical context for restoration in Marsh Creek, ID
Graham Meese

Policy & Practice
Justifying Justice: Seeking Foundations for the Rights of Accused Persons
Kurt Fertig

Social Influences
Understanding Parental Misclassification of Child Weight Status
Tanna Woods & Mary Nies

Teaching & Learning Opportunities
How Student Borrowers in Montana Understand Student Loans
Teresa Borrenpohl

People’s Choice Poster
Healthcare: Name Your Own Price?
Richard Ashcraft & Nate Babb

ORAL PRESENTATION SESSION
Building Success Across Diverse Context
Exploring the Publication Network of Graduate Students Across Programs: A Social Network Analysis
Douglas Cruthirds, Jessica N. Stoker & Douglas E. Colman

Business Strategies & Globalization
Sovereign Abkhazia for Sovereign Abkhazians: Analyzing the Abkhaz Irredentist Movement’s Narrative for Independence in a Post-Soviet World
Alden Allen
Complex Social & Behavioral Systems
*Pupil Dilation and Blink Rate as Measurements of Cognitive Load During Deception*
Reinalyn Echon, Kandi Turley-Ames, Shana Humphreys & Charles Parker

Culture & Arts
*Inherited Ghosts of Racial Conflict in Toni Morrison's Beloved and Chief Seattle's Speech on the Land*
Emily Treasure

Health & Innovations
*Retinoic-Acid Induced Spina Bifida in Rats: Behavior and Morphology*
Hillary Swann, Leah Kollmeyer, Steven Conway, Valerie Mendez-Gallardo, Kira Hunter, Nicholas Burgett & Michele Brumley

History & Policy
*Idaho’s Political Preference for Property over People*
Jill Kirkham

Natural Science & Environmental Studies
*Quantitatively mapping lava flow textures at Craters of the Moon*
Hester Mallonee, Shannon Kobs Nawotniak, Michael McGregor, Donna Delparte, Scott Hughes & the FINESSE Team

New Paradigms in Science & Engineering
*Augmented Efficiency of CLA Logic Though Multiple CMOS Configurations*
Naga Spandana Muppaneni & Steve Chiu
FAST DYNAMICS ANALYSIS AND ACTIVE CONTROL OF SPIKE TYPE STALL INCEPTION IN A ONE STAGE AXIAL COMPRESSOR SYSTEM.
Nirmeet Adhvaryu

IMPLICIT THEORIES OF AGING AS A PREDICTOR OF SELF-PERCEPTIONS OF AGING, IMPLICIT BIAS, AND AGE IDENTITY IN A RURAL COMMUNITY
Kellie Brown

THE COGNITIVE LOAD OF DECEPTION USING EYE TRACKING
Reinalyn Echon

WERther’s FAILED EMBODIMENT: SENTIMENTAL FICTION AND EMBODIED COGNITION IN THE SORROWS OF YOUNG WERTHER
Sarah Garelik

AN EMPirical EXAMINATION OF STIGMA TOWARD MENTAL HEALTH PROBLEMS AND TREATMENT USE IN VETERANS
Jonathan Goode

SEASONAL GROUNDWATER INFLUENCE ON VELOCITY OF A SLOW MOVING, ROTATIONAL LANDSLIDE FROM HIGH-PRECISION, CONTINUOUS GPS OBSERVATION, SALMON FALLS LANDSLIDE, IDAHO
Ian Lauer

STREAM STRUCTURE AT LOW FLOW: BIOGEOCHEMICAL PATTERNS OF INTERMITTENT STREAMS OVER SPACE AND TIME
Ruth MacNeille

HARVESTING ELECTRICAL ENERGY FROM POTATO PROCESSING WASTEWATER USING A MULTIPLE ANODE PLATE HARVESTING ELECTRICAL ENERGY BY MICROBIAL FUEL CELL
Muhammad Zunnun Ibna Mostafa Mahmud

GRASPING UNKNOWN OBJECTS IN CLUTTER BY SUPERQUADRIC REPRESENTATION
Abhijit Makhal

MEDIATORS AND MODERATORS OF THE RELATIONSHIP BETWEEN WORKING MEMORY AND READING COMPREHENSION
Charles Parker
THE PROCESS OF BECOMING A GATEKEEPER IN COUNSELOR EDUCATION
Marisa Rapp

TEACHING ENGLISH THROUGH COMMUNITY ENGAGEMENT
Richard Samuelson

SCREENING OF KNOCKDOWN RESISTANCE (KDR) MUTATIONS IN VOLTAGE GATED SODIUM CHANNEL OF MOSQUITOS FOUND IN BANNOCK COUNTY, IDAHO
Kshitij Shrestha

IMPACT OF SOIL TRANSMITTED HELMINTHS
Sadie Stoddard

COMMUNITY & FAITH IN BRonte’S JANE EYRE
Ryan Tallmon

IMPLEMENTATION OF FFT AND IFFT ALGORITHMS IN NXP LPC1768 FOR PLANT/PROCESS SIMULATION
Sabin Tandukar

OPTIMIZATION OF A NEUTRON AND GAMMA RAY LAYERED SHIELD FOR HOT CELLS CONTAINING USED NUCLEAR FUEL
Aaron Thompson

ROLE OF CENTRAL [H+] AND CO2 IN EARLY RHYTHMIC NEURAL ACTIVITY AND BREATHING RHYTHMS IN THE DEVELOPING ZEBRA FINCH BRAINSTEM
Jessica Whitaker-Fornek

BIGGER ON THE INSIDE: CODIFYING THE CHRONOTOPE OF THE LABYRINTH
Paul Williams
# ORAL PRESENTATIONS

**HUMANITIES, BEHAVIORAL & SOCIAL SCIENCES (A)**  
**FRIDAY, 4:45 PM - 6:30 PM**  
**MIDDLE FORK**

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<tr>
<td>4:45 PM</td>
<td>CARL’S JR. SHIFTED CAMPAIGN: LITERATURE REVIEW OF CORPORATE IMAGE REPAIR</td>
<td>Johnson, Elisa</td>
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<tr>
<td>5:00 PM</td>
<td>TEACHING POLITICS THROUGH EXPERIENTIAL LEARNING</td>
<td>Brown, Chris</td>
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<tr>
<td>5:15 PM</td>
<td>WHERE THE SUN SHOULD NOT SHINE: RECORD KEEPERS AND THE PUBLIC’S PERCEPTIONS OF IDAHO’S PUBLIC RECORDS LAWS AND VICTIM PRIVACY RIGHTS</td>
<td>Kirkham, Jill</td>
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<tr>
<td>5:30 PM</td>
<td>&quot;WE TWO&quot;: A SYMPATHEIC READING OF &quot;THE WIFE'S LAMENT&quot;</td>
<td>Merrill, Katherine</td>
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<td>5:45 PM</td>
<td>U.S. PUBLIC LANDS: COMMUNITY INTERACTION WITHIN A REMNANT OF THE WESTERN RESOURCE FRONTIER</td>
<td>Heaps, Kiley</td>
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<td>6:00 PM</td>
<td>ENTROPY</td>
<td>Mayer, Rachael</td>
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**HUMANITIES, BEHAVIORAL & SOCIAL SCIENCES (B)**  
**FRIDAY, 4:45 PM – 6:30 PM**  
**SOUTH FORK**

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<tr>
<td>4:45 PM</td>
<td>THE IMMIGRATION DEBATE ON TWITTER</td>
<td>Pearsall, Chadwick</td>
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<td>5:00 PM</td>
<td>MARCH OF THE MATTACHINE: HOMOPHILE ACTIVISM TO GAY LIBERATION IN POSTWAR AMERICA, 1945 TO 1970</td>
<td>Peterson, David</td>
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<td>5:15 PM</td>
<td>THE IDAHO FALLS ART GUILD - ART MOVEMENT?</td>
<td>Pehrson, Joseph</td>
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<td>5:30 PM</td>
<td>SINGLE MOTHERS IN ACTION: AN ASSESSMENT OF FAMILIAL SOCIALIZATION TOWARD</td>
<td>James, Pascali</td>
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<td>5:45 PM</td>
<td>AN ANALYSIS OF DAVID LEWIS’S COUNTERFACTUAL ANALYSIS USING SIMPLE WORLDS</td>
<td>Norris, P James</td>
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<tr>
<td>Time</td>
<td>Title</td>
<td>Presenter(s)</td>
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<tr>
<td>6:00 PM</td>
<td>BIGGER ON THE INSIDE: CODIFYING THE CHRONOTOPE OF THE LABYRINTH</td>
<td>Williams, Paul</td>
</tr>
<tr>
<td>6:15 PM</td>
<td>CHALLENGING IDAHO GO-ON RATES: NEW METHODS IN DISCOVERING BETTER MEASUREMENTS FOR POST-SECONDARY ACHIEVEMENT</td>
<td>Udy, Braeden; Kirkham, Jill</td>
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<td><strong>BIOLOGICAL &amp; NATURAL SCIENCES</strong></td>
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<tr>
<td>4:45 PM</td>
<td>VEGETATION COMMUNITY CLASSIFICATION AND MAPPING ON THE SNAKE RIVER PLAIN</td>
<td>Bayless-Edwards, Aurora; Aho, Ken; Forman, Amy; Shive, Jeremy; Delparte, Donna; Bottenberg, H. Carrie</td>
</tr>
<tr>
<td>5:00 PM</td>
<td>HISTORIC SALMON ABUNDANCE IN SITUK AND MOUNTAIN LAKES, YAKUTAT, ALASKA INFERRED FROM LAKE SEDIMENT $\delta^{13}$C AND $\delta^{15}$N STABLE ISOTOPES</td>
<td>Jurkowski, Carl; Finney, Bruce</td>
</tr>
<tr>
<td>5:15 PM</td>
<td>SEASONAL GROUNDWATER INFLUENCE ON VELOCITY OF A SLOW MOVING, ROTATIONAL LANDSLIDE FROM HIGH-PRECISION, CONTINUOUS GPS OBSERVATION, SALMON FALLS LANDSLIDE, IDAHO</td>
<td>Lauer, Ian; Crosby, Benjamin</td>
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<tr>
<td>5:30 PM</td>
<td>NUTRIENT DYNAMICS IN CONSTRUCTED STORMWATER WETLANDS IN SEMIARID CLIMATES</td>
<td>Macek, Carolyn</td>
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<tr>
<td>5:45 PM</td>
<td>STREAM STRUCTURE AT LOW FLOW: BIOGEOCHEMICAL PATTERNS OF INTERMITTENT STREAMS OVER SPACE AND TIME</td>
<td>MacNeille, Ruth; Lohse, Kathleen; Sarah, Godsey; Derryberry, DeWayne; McCorkle, Emma; Parsons, Susan; Baxter, Colden</td>
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<tr>
<td>6:00 PM</td>
<td>FARMERS, FENCES AND FINE SEDIMENT: USING LONG-TERM WATER QUALITY DATA AND AERIAL IMAGERY TO QUANTIFY THE IMPACT OF BEST MANAGEMENT PRACTICES IN MARSH CREEK, ID</td>
<td>Meese, Graham</td>
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6:30 PM HYDROLOGIC AND ENVIRONMENTAL VARIABILITY OF THE PAST 7,500 YEARS AT MORRISON LAKE, MT
Thomas, Joseph
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<thead>
<tr>
<th>Time</th>
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<th>Details</th>
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<tr>
<td>8:30 AM</td>
<td>INVESTIGATING HYPOKALEMIC PERIODIC PARALYSIS MUTATIONS IN HNAV1.4: A MATHEMATICAL APPROACH</td>
<td>Bayless-Edwards, Landon; Groome, James; Lehmann-Horn, Frank; Winston, Vern; Jurkat-Rott, Karin</td>
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<td>8:45 AM</td>
<td>HIGH GAIN ULTRA WIDE BAND MILLIMETER WAVE ANTENNA</td>
<td>Kalavapudi, Kashyap</td>
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<tr>
<td>9:00 AM</td>
<td>HARVESTING ELECTRICAL ENERGY FROM POTATO PROCESSING WASTEWATER USING A MULTIPLE ANODE PLATE</td>
<td>Mahmud, Muhammad Zunnun Ibna Mostafa</td>
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<td>HARVESTING ELECTRICAL ENERGY BY MICROBIAL FUEL CELL</td>
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<td>9:15 AM</td>
<td>GRASPING UNKNOWN OBJECTS IN CLUTTER BY GRASPING UNKNOWN OBJECTS IN CLUTTER BY SUPERQUADRIC</td>
<td>Makhal, Abhijit</td>
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<td>REPRESENTATION</td>
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<td>9:30 AM</td>
<td>PROCESS/PLANT SIMULATION THROUGH IMPLEMENTATION OF FFT/IFFT IN LPC 1768</td>
<td>Tandukar, Sabin; Dhamala, Anupama; Lin, Wilson</td>
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<td>9:45 AM</td>
<td>OPTIMIZATION OF A NEUTRON AND GAMMA RAY LAYERED SHIELD FOR HOT CELLS CONTAINING USED NUCLEAR</td>
<td>Thompson, Aaron</td>
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<td>HUMANITIES, BEHAVIORAL &amp; SOCIAL SCIENCES (C)</td>
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<tr>
<td>8:30 AM</td>
<td>MODERNITY AND SEXUAL IDENTITY: IDENTITY CRISIS IN LOUIS OWEN’S BONE GAMES PRESENTATION</td>
<td>UDY, BRAEDEN</td>
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<td>9:00 AM</td>
<td>AN ECOCRITICAL STUDY OF THE POX: ITS VICTIMS AND SCAPEGOATS IN MADAME DE SÉVIGNÉ</td>
<td>Treasure, Emily</td>
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<td>9:15 AM</td>
<td>STABILITY OF DELAY DISCOUNTING VALUES FOR FOOD AND MONEY REWARDS</td>
<td>Rodriguez, Luis; Rasmussen, Erin; Lee, Yaeuen; Robertson, Stephen</td>
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<td>9:30 AM</td>
<td>THE LINK BETWEEN PRENATAL TESTOSTERONE AND SELF-REPORTED ATHLETIC ABILITY</td>
<td>Moody, Daniel; Hoskin, Anthony</td>
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<td>9:45 AM</td>
<td>COMMUNITY &amp; FAITH IN BRONTE'S JANE EYRE</td>
<td>Tallmon, Ryan</td>
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<td>9:45 AM</td>
<td>TWITTER NARRATIVES ON THE TRUMP TRAVEL BAN: THE DEVIL AND BLAME SHIFTS</td>
<td>Clover Prigent, Misty</td>
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<td><strong>BUSINESS, ECONOMICS &amp; PUBLIC ADMINISTRATION</strong></td>
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<td><strong>SOUTH FORK</strong></td>
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<td>8:30 AM</td>
<td>TECHNOLOGY-BASED PUBLIC POLICY INTERVENTIONS TO ENHANCE ACCESS TO HEALTH CARE SUPPORT: A STUDY IN THE CONTEXT OF RURAL BANGLADESH</td>
<td>Afzal, Hassan; Cravens, Dr. Larry</td>
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<td>8:45 AM</td>
<td>MEDICAL LABORATORY SCIENTISTS AND STATE LICENSURE: PERCEPTIONS REPORTED BY PHYSICIANS, STUDENTS, AND PRACTICING MLS PROFESSIONALS IN IDAHO</td>
<td>O'Neal, Niki</td>
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<td>9:00 AM</td>
<td>CREATING A GLOBAL CITIZEN THROUGH THE INTERNATIONAL BACCALAUREATE PROGRAM</td>
<td>Aktas, Volkan; Eakins, Sheldon</td>
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<td>DEVELOPING ESL IDENTITY IN FIRST-YEAR COMPOSITION</td>
<td>Kim, Wonjeong</td>
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<td>9:30 AM</td>
<td>WHAT MAKES AN EFFECTIVE SUBCULTURE ON A COMMUNITY COLLEGE CAMPUS?</td>
<td>Lord, Jonathan</td>
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CREATIVE WORKS
SATURDAY, 10:15 AM – 12:15 PM
BALLROOM

TECHNO PORTRAYAL
Nikyra Capson

INTRODUCING PERSIAN CULTURE TO THE WEST
Tirazheh Eslami

“The Graduate Research Symposium is a great way to gain experience giving poster or oral presentations at a small and student-friendly environment.”
POSTER PRESENTATIONS

EDUCATION, LEARNING, & TRAINING

#42 CRITICAL QUALIFICATIONS OF JUNIOR COLLEGE ATHLETIC DIRECTORS
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#7 INTERSCHOLASTIC ATHLETICS AT SMALL IDAHO HIGH SCHOOLS
Astle, Brody; Faure, Caroline

#19 RULES BEYOND THE FIELD: RESTRICTIONS PLACED ON STUDENT ATHLETES
SOCIAL MEDIA USE
Besseris, Michael; Faure, Caroline

#46 TRANSGENDER ATHLETE PARTICIPATION IN IDAHO STATE HIGH SCHOOL
ATHLETICS
Eagleburger, Eric; Bell, Khalil

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#5 THE EFFECT OF THE DISCONTINUATION OF FORMALIZED ELEMENTARY
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#25 IDAHO STATE SPORTS SPECIALIZATION
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TECHNIQUES AT ISU.
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MOTIVATIONS, DECISIONS, AND OPPORTUNITIES
Riley, Leila; Fauple, Natalee; Blair, Brooke

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#13 HEALTH RISK KNOWLEDGE AND ITS EFFECT ON OBESITY
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<td>Casanova, Maximilian; Clauson, Chris; Ebrahimpour, Arya; Mashal, Mustafa</td>
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<td>Andreasen, Chelsey; Ramsdell-Hudock, Dr. Heather</td>
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<td>Ritter, Jeanna</td>
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<td>Warren, Carley</td>
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<td>#37</td>
<td>ALTERNATED HINDLIMB STEPPING BEHAVIOR DEVELOPMENT AND SEROTONIN RECEPTOR PLASTICITY IN THE INTACT AND ISOLATED SPINAL CORD</td>
<td>Bozeman, Aimee; Kauer, Sierra; Brumley, Michele</td>
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<td>#20</td>
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<td>Gibson, Jacob; Letzring, Tera; Colman, Douglas</td>
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<td>#26</td>
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<td>Craun, Elizabeth; Kaplan, Stephanie; Goode, Jonathan; Aubuchon-Endsley, Nicki; Wong, Maria</td>
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<td>#44</td>
<td>PHYSICAL VIOLENCE, SEXUAL VIOLENCE, AND WOMEN’S HEALTH IN THE DEVELOPMENT OF PTSD AND DEPRESSION IN INCARCERATED WOMEN</td>
<td>Cummings, Danielle; Mozafari, Ahva; Weber, Shelby; Perschon, Bailey; Lynch, Shannon</td>
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<td>#32</td>
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<td>#1</td>
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<td>Krzyzaniak, Sheherezade; Pedersen, Chloe; Gibson, Jacob; Barclay, Taeg; Letzring, Tera</td>
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#4 THE RELATION BETWEEN TIME OF DAY AND BEHAVIORAL MEASURES OF IMPULSIVITY
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#34 SUMMARY TYPE INFLUENCE ON METACOMPREHENSION ACCURACY
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#14 TRAIT MINDFULNESS AS A MODERATOR OF JUDGMENTAL ACCURACY OF ACQUAINTANCES
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#16 STABLE ISOTOPES AND ANCIENT MAYA DIET
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#6 THE RELATIONSHIP BETWEEN SUBJECTIVE HUNGER AND DELAY DISCOUNTING FOR REAL VS. HYPOTHETICAL OUTCOMES
Perschon, Bailey; Robertson, Stephen; Rasmussen, Erin

#28 QUEER FAMILIES: THE DEVELOPMENT OF LGBTQ COMMUNITIES IN THE UNITED STATES, 1900 - 1945
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#49 FRIENDSHIP V. FAITH: HOW MORMON COLLEGE STUDENTS MANAGE BELIEFS ABOUT AND INTERACTIONS WITH GAY AND LESBIAN PERSONS
Sargent, Jessica; Thomas, Jeremy

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#30 REACTIONS TO TRAUMA-FOCUSED RESEARCH IN INCARCERATED WOMEN
Smith, Kathleen; Pemberton, Shelby; Lawyer, Steven

#22 THE RELATIONSHIP BETWEEN WEIGHT-BEARING LOCOMOTION AND TENDON CHARACTERISTICS IN RATS: POSTNATAL DEVELOPMENT
Swann, Hillary; Burgett, Nicholas; Becker, J.J.; Funk, S.K.; Raveling, A.R.; Schiele, Nathan; Brumley, Michele

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Wood Roberts, Barbara; Anderson, Tessa; Xu, Xiaomeng
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<td>SEDIMENT AND PARTICULATE ORGANIC CARBON EXPORT IN A SEMI-ARID</td>
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<td>ROTATIONAL LANDSLIDE FROM HIGH-PRECISION, CONTINUOUS GPS</td>
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<td>#47</td>
<td>SCREENING OF KNOCKDOWN RESISTANCE (KDR) MUTATIONS IN VOLTAGE</td>
<td>Shrestha, Kshitij; Groome, Dr. James R.</td>
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<td>#33</td>
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<td>Wehrs, Katherine; Crosby, Benjamin</td>
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<td>LONGITUDINAL OBSERVATIONS OF TERRACE AND HILLSLOPE RESPONSE TO</td>
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<td>INCISION ALONG THE SOUTH FORK EEL RIVER, CA</td>
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Adhvaryu, Nirmeet; Schoen, Marco  
**Category:** Engineering, Physical & Mathematical Sciences  
**Poster #43**  
**Fast dynamics analysis and active control of spike type stall inception in a one stage axial compressor system.**  
The research details the system identification, modelling and control of the fast dynamics of a one stage axial compressor system. A control strategy to delay the onset of rotating stall is proposed. The system identification is focused on the relationship between the compressor flow coefficient and pressure rise coefficient as well as the compressor dynamics in and around the rotor blade passages.

Afzal, Hassan; Cravens, Larry  
**Category:** Business, Economics & Public Administration  
**Technology-Based Public Policy Interventions to Enhance Access to Health Care Support: A Study in the Context of Rural Bangladesh**  
Bangladesh is one of the most populous countries in the world and the current population is 165.06 million. Almost more than half of the total population does not have proper access to proper healthcare support due to the shortage of the appropriate number of healthcare facilities and registered doctors. The latest research analysis and study conducted by WHO states that now there’s only 3 doctors and 3 nurses per 1000 people in Bangladesh. Further comprehensive research indicates that there are certain rural and remote locations in Bangladesh where there are no available hospitals and/or registered doctors to provide required health care facilities. Thus, against this the backdrop, there is an urgent need to understand whether and how the government could utilizes IT tools such as mobile apps to facilitate access to healthcare support. This exploratory research study thoroughly focuses on the various problem areas in rural health care facilities available to the rural population of Bangladesh, and proposes an alternative and sustainable approach to overcome such gap in medical services for this underserved population.
Anderson, Lindsey; Cartisser, Heidi; Rasmussen, Clark; Faure, Caroline  
**Category:** Education, Learning & Training  
**Poster #42**  
**Critical Qualifications of Junior College Athletic Directors**  
This study examined the professional qualifications junior college presidents within the Scenic West Athletic Conference seek when hiring athletic directors. Specifically, this study sought to answer questions about what qualities and/or characteristics presidents felt were most important when hiring athletic directors as well as how accessible candidates were who possessed those favorable qualities.

Andreasen, Chelsey; Ramsdell-Hudock, Dr. Heather  
**Category:** Health, Nutrition & Clinical Sciences  
**Poster #50**  
**Infant Gaze Direction, Early Vocalizations, and Vocabulary Development**  
Vocabulary growth is crucial for a child’s language development. A well-developed vocabulary is necessary for literacy comprehension and communication as a whole (Moghadam, Zainal, & Ghaderpour, 2012). The purpose of this project is to identify the relationship between infant gaze direction and later development of expressive and receptive vocabulary.

Astle, Brody; Faure, Caroline  
**Category:** Education, Learning & Training  
**Poster #7**  
**Interscholastic Athletics at Small Idaho High Schools**  
Interscholastic athletics at the smallest high schools in the state of Idaho has troubled athletic administrators from the time sports were introduced. The inability to access the resources necessary to compete at the top level has created several barriers that have made it extremely difficult to field and fund athletic programs at this level. The small school size, location, lack of budget, and several other factors have put many of these schools in tough positions as they focus on keeping athletic programs running.
Aktas, Volkan; Eakins, Sheldon  
**Category:** Education, Learning & Training  
**Creating a Global Citizen Through the International Baccalaureate Program**

Numerous studies have been conducted to examine the benefits and effects of the IBDP in the high school students’ academic journey. The IB had been growing significantly since its creation in 1968. Its vision to prepare students to enter increasingly competitive colleges and globalized markets make the IB an excellent educational institution. It has encountered some setbacks from countries that have policies against denationalization of education. Nevertheless, IB is working toward improving the programs so that they properly align with international standards and needs. Furthermore, IB has made significant advancements in its recruitment practices and opened its doors towards a broader public as there is an increasing number of IB schools among Title I recognized schools. These new efforts help the schools regarding a number of enrollment and stability of administrators without neglecting the high and rigorous standards that IB is esteemed for.

Despite the rigor, costs, and requirements associated with implementing the IBDP, many school stakeholders believe that the program is worth the cost. Students that participate in the program have been known to excel and persist in post-secondary institutions. While the IBDP is internationally recognized as superior to many national curriculum standards, there is a lack of literature on students studying abroad immediately after high school. Additionally, there is limited literature on what resources high schools that offer the IBDP provide to advocate the benefits of studying abroad.

This presentation will delineate the benefits of studying abroad and how providing more access to IBDP may increase the likelihood of students going overseas to study after high school. Therefore, to make a global citizen, students must participate in an internationally based curriculum designed with culturally diverse experiences and practices.

Augustine, Steven; Reinhardt, Keith  
**Category:** Biological & Natural Sciences  
**Poster #18**  
**The Mechanisms of Mortality: First Year Seedling Survival in the Presence of Drought**

First year seedlings represent a delicate life stage in forest communities, functioning as a bottleneck for forest ecosystems. The inability of forest vegetation to regenerate in the face of climate change will eventually cause limitations to species’ distributions and community shifts. Current climate scenarios estimate that the global mean temperature will rise 2-5°C in the coming
centuries. Arid forest ecosystems, environments defined by limited and variable water resources, are especially vulnerable to shifts in temperature, as these shifts in are predicted to induce more frequent and persistent droughts. Seedling mortality has been shown to be exacerbated in the presence of drought, though the underlying physiological mechanisms behind the seedling mortality have been critically understudied. This study looked at the underlying mechanisms driving the mortality of two common pine seedlings in the presence of drought, with a focus on how the water and carbon balances were altered during development. Through the use of a greenhouse study, the weekly quantification of both the carbon and water balance allowed for an assessment of mortality to be made. The observed trends of seedling mortality highlight ontogenetic differences in pines, with seedlings operating on narrow carbon budgets, functioning close to hydraulic failure to ensure adequate carbon gain. Seedlings quickly reached a stress threshold and experienced extensive mortality, where no seedlings were able to survive an entire summer under a water deficit. With current climate scenarios, it is clear that seedlings will continue to limit native forest regeneration in the intermountain west.

Bayless-Edwards, Aurora; Aho, Ken; Forman, Amy; Shive, Jeremy; Delparte, Donna; Bottenberg, H. Carrie
Category: Biological & Natural Sciences
Vegetation Community Classification and Mapping on the Snake River Plain
There is a growing need to monitor vegetation communities in semi-arid systems, because they play a vital role in the global carbon cycle. Water limitation is the most important constraint on primary productivity in semi-arid systems, such as South Eastern Idaho. This region is projected to have increased winter precipitation due to climate change, potentially increasing its capacity for carbon sequestration. Thus, South Eastern Idaho has been implicated as a possible future carbon sink. This effect, however, will likely be scale-dependent due to variations in plant growth form (e.g. grass, forb, shrub). Therefore, this project sought to classify and map plant communities in a 2,300 square kilometer section of the Snake River Plain.

Bayless-Edwards, Landon; Groome, James; Lehmann-Horn, Frank; Winston, Vern; Jurkat-Rott, Karin
Category: Engineering, Physical & Mathematical Sciences
Investigating hypokalemic periodic paralysis mutations in hNaV1.4: a mathematical approach
Hypokalemic periodic paralysis is a muscular disease characterized by episodes of flaccid paralysis associated with low serum potassium. Mutations linked to this disease have been found in the
voltage-gated sodium channel, hNaV1.4. This protein consists of four domains, each containing a voltage sensor motif and a pore motif. Mutations associated with hypokalemic periodic paralysis are found in the voltage sensor motif of domain I – III. This protein is critical to the propagation of electrical signals, called action potentials, through skeletal muscle fibers. Our current work characterizes the biophysical effects of hypokalemic periodic paralysis mutations in different domains.

Beseris, Michael; Faure, Caroline
Category: Education, Learning & Training
Poster #19
Rules Beyond The Field: Restrictions Placed On Student Athletes Social Media Use
Since the launch of Facebook in 2004, social media has become a staple in today’s society. Social media is great in that it allows for individuals to share information instantaneously and connect with others at the touch of a button, which is shown through the rise of both personal platform like Twitter and Instagram, to name a few. Because of the growth of both social media and technology, these platforms have created outlets for all. In fact, in a study published by the Journal of Public Health in 2015, researchers looked into the notion that young adults often view social media as a form of emotional support, and found that social media use is very prevalent among this demographic, and also that social media usage may be able to describe an individual’s wellbeing (Shensa, Sidina, Lin, Bowman, & Primack, 2015). The significance of this research is that college athletes, typically aged 18-24, fit within this young adult demographic. With the continued growth of social media, kids are going to continue to share their life for the world to see, and sometimes that sharing can impose a negative image. If associated with a university, that athletic program will indirectly adopt those images, and it creates a self-image and sometimes can even impose legal implications depending on what was done or said, and then posted about. The purpose of this case study examine the presence of restrictions placed on student athletes by coaches relative to their social media usage. This study will investigate 1) how student athletes use personal social media sites, 2) their thoughts and feelings regarding these sites and, 3) how they feel they are monitored by either their athletic department or by coaches.
Bozeman, Aimee; Kauer, Sierra; Brumley, Michele  
Category: Humanities, Behavioral & Social Sciences  
Poster #37

**Alternated Hindlimb Stepping Behavior Development and Serotonin Receptor Plasticity in the Intact and Isolated Spinal Cord**

Examining stepping behavior in spinal transected rats can provide insights into the spinal and supraspinal mechanisms that regulate locomotion. This project examined changes in hindlimb stepping behavior in intact and spinal rat pups, as well as changes in serotonin receptor density in the lumbar spinal cord.

Brown, Chris  
Category: Humanities, Behavioral & Social Sciences (A)

**Teaching Politics through Experiential Learning**

Experiential learning has become a significant instructional methodology for those seeking an alternative to the traditional lecture/exam format. Broadly, it is a method that expects students to "learn by doing," especially in relation to what professionals of a particular field are expected to do. Applying this approach to the teaching of politics presents unique challenges and opportunities. How does one incorporate "learn by doing" into a fundamentally academic subject while also meeting basic learning goals and outcomes?

The University of Montana-Western, my alma mater, holds experiential learning as a key institutional value. Exposure to the experiential method of teaching has had a significant impact on how I approach teaching in my early career. This presentation will introduce and demonstrate how experiential learning can be applied in the teaching of politics. I was invited to speak on this topic on a panel at the Pacific Northwest Political Science Association Conference, and this presentation is an adaptation of what was discussed at that panel.

Brown, Kellie  
Category: Three Minute Thesis

**Implicit theories of aging as a predictor of self-perceptions of aging, implicit bias, and age identity in a rural community**

Growth mindset of aging refers to the way in which an individual believes their aging process to be either changeable or fixed (Weiss and Weiss, 2016). Research has shown that those who believe their aging to be fixed (i.e. not a growth mindset) display poorer memory (Weiss, 2016), a more restricted future time perspective and increased anxiety about aging (Weiss et al., 2016). How a growth mindset of aging may differentially affect explicit versus implicit outcomes is less
well studied. Explicit self-perceptions of aging are known to be linked to health outcomes and life satisfaction (Levy et al., 2002; Kiarsipour, 2017), though importantly have not yet been examined in relation to growth mindset of aging. Additionally, it may be the case that implicit bias towards older adults can be reduced by priming a growth mindset. How growth mindset influences these explicit and implicit beliefs towards aging is the purpose of this study. It is hypothesized that priming individuals with a growth mindset of aging will result in more positive self-perceptions of aging as well as decreased implicit bias against older adults compared to those primed with a fixed mindset of aging.

Capson, Nikiya  
Category: Creative Works  
**Techno Portrayal**  
Social media has become an integrated component of modern society. Our lives, thoughts, and positions are seemingly migrating from the private realm to the public atmosphere of the internet. Technology has become widely accessible throughout the world over the last decade and has left some people at a juxtaposition between reality and the artificial world. In my work, I examine this relationship as well as the wall of anonymity that the internet provides its user. My artwork combines traditional art media, such as charcoal, oil and acrylic paint with technological advancement and symbolism, such as the ability to print hand-drawn imagery onto fabric. Through these means, I am able to express the connection between the physical world we exist in and the one made of pixels and binary code.

Casanova, Maximilian; Clauson, Chris; Ebrahimpour, Arya; Mashal, Mustafa  
Category: Engineering, Physical & Mathematical Sciences  
Poster #27  
**High Early Strength Concrete with Fibers for Connecting Precast Elements in Accelerated Bridge Construction**  
Idaho Transportation Department (ITD) is searching for an alternative connection detail to be used in Accelerated Bridge Construction (ABC) precast deck elements in order to reduce costs and construction time versus currently used Ultra High Performance Concrete (UHPC) connections. Cost savings are substantial and range from $50K to $100K per bridge.
Clover Prigent, Misty  
**Category:** Humanities, Behavioral & Social Sciences (C)  
**Twitter Narratives on the Trump Travel Ban: The Devil and Blame Shifts**  
This paper examines tweets concerning immigration and the US-Canada border in relation to a focusing event. The tweets are examined as narratives as defined by the Narrative Policy Framework (NPF), and the paper integrates elements of the Advocacy Coalition Framework (ACF), while also using Geographic Information Systems (GIS) for geographic data. Research questions were the following: 1. Were there changes in the devil shift in tweets mentioning the “US Canada border” before, during, or after the focusing event on January 27th? 2. Was there more victimization than blame in tweets mentioning the “US Canada border” before, during, or after the focusing event on January 27th? This will be measured by the blame shift. 3. Is there a difference in anti-immigration versus pro-immigration coalitions based on location? 4. Does geological location of tweets from the two border countries (United States and Canada) affect perceptions of the border or opposing policy actors?

Craun, Elizabeth; Kaplan, Stephanie; Goode, Jonathan; Aubuchon-Endsley, Nicki; Wong, Maria  
**Category:** Humanities, Behavioral & Social Sciences  
**Poster #26**  
**The association between neurocognitive functioning of inmates and the frequency of criminal behavior**  
Incarcerated individuals display cognitive deficits relative to their non-offending counterparts. New research with inmates has demonstrated that deficits in cognitive flexibility are associated with frequency of criminal behavior. The purpose of this study was to replicate and expand upon these results by assessing neurocognitive functioning of inmates and its relationship to frequency of crime.

Cummings, Danielle; Mozafari, Ahva; Weber, Shelby; Perschon, Bailey; Lynch, Shannon  
**Category:** Humanities, Behavioral & Social Sciences  
**Poster #44**  
**Physical Violence, Sexual Violence, and Women’s Health in the Development of PTSD and Depression in Incarcerated Women**  
Women enter the criminal justice system at increasing rates, often with extensive trauma histories, significant mental health concerns, and physical health problems. These experiences increase risk
for psychological and physical distress. While lifetime PTSD prevalence is around 8% nationally, previous work found rates as high as 53% among female jail inmates. In non-offending populations, sexual and physical traumatization is linked to increased risk of women’s health problems, with rates of all three linked to PTSD. Additionally, reports of health problems may exacerbate symptoms of PTSD. Furthermore, prevalence rates of comorbid PTSD and depression are as high as 35%. Addressing the understudied population of incarcerated women, the present study hypothesized that sexual violence, physical violence, and women’s health uniquely and concurrently contribute to current PTSD and depression. 152 women were randomly selected from a Mountain West prison, with a mean age of 37.0 years (SD = 10.5). Approximately 67.1% of the women were repeat offenders, with a median sentence length of seven years. Participants completed the Trauma History Questionnaire, Clinician-Administered PTSD Scale for DSM-5, Center for Epidemiological Studies - Depression Scale, and the Women’s Medical Health History Questionnaire. Preliminary analyses revealed that 94.7% of women indicated at least one experience of intimate trauma, and endorsed an average of 6.57 medical conditions (SD = 3.83). Additionally, there was a significant correlation between current PTSD and depression (r = .40, p < .01). Using a multivariate multiple regression model, we will examine sexual violence, physical violence and women’s health as predictors of current PTSD and depression. Taken together, this work will potentially inform implementation of effective treatment services for incarcerated women. Both in and out of the criminal justice system, research must focus on the multidirectional relationships between trauma and mental and physical health problems. Poster submitted for review for WPA, 2018.

Eagleburger, Eric; Bell, Khalil
Category: Education, Learning & Training
Poster #46
Transgender Athlete Participation in Idaho State High School Athletics
Transgender athletes have been fighting for equal guidelines for inclusion for many years. Since transgender athletes are becoming more prevalent in high schools and the collegiate level there needs to be a universal set of eligibility requirements so all athletes feel included in athletics at their institution. There is currently a wide range of eligibility requirements varying by state and by making a universal system it would help transgender athletes not just in their early years but for years to come. Queer theory will be used to support the idea that we should have more inclusive guidelines for all athletes Queer theory is a post-structuralist theory that emerged in the early 1900’s that is a set of beliefs that state identities are not fixed and do not determine who we are (Mendick, 2014). The case study is conducted by interviewing two athletic directors in southeast
Idaho. The study finds participating in sports with the gender they identify with has a positive effect on transgender athletes. Additionally, there is no competitive advantage gained by transgender athletes. Finally, the study addresses problems with the current Idaho state policy regarding transgender athlete participation.

Keywords: Transgender athlete, Queer Theory, Policy, Inclusion, High School.

Echon, Reinalyn; Turley-Ames, Kandi Jo
Category: Three Minute Thesis
The Cognitive Load of Deception Using Eye Tracking
According to meta-analyses of deception detection accuracy, the behavioral cues that both laypeople and experts use to determine whether someone is lying or telling the truth tend to be inaccurate indicators of deception (Bond & DePaulo, 2006; DePaulo et al., 2003). The present study seeks to elucidate the role of working memory in managing cognitive load in deceptive accounts using eye tracking to measure pupil size and blink rate, which are known indicators of cognitive demand (e.g., Dionisio, Granholm, Hillix, & Perrine, 2001; Leal & Vrij, 2008).

Eslami, Tirazeh
Category: Creative Works
Introducing Persian Culture to the West
My work is a bridge between my past and present. I seek to broaden cultural awareness, specifically to communicate to Western society the richness and beauty of my Persian culture. I hope to build a visual chronicle, which successfully encapsulates Persian history and symbolic cultural events. I am inspired, changed and challenged by the experience of living in two different cultures. The marriage of these experiences is at the center of my studio work. In order to effectively craft this connection, I have studied and relied on hybrid identity theory to justify and explore the multicultural experience.

Hybrid identity, although understood as a newer perspective in cross-culturalism, is a concept that actually predates artistic categorization altogether. I use the concept to offer a memorable contrast. For instance, though my work resonates with both East and West, the emphasis is placed on the Eastern viewpoint in order to pay tribute to my roots. A pertinent example of Eastern and Western perspectives can be seen in my newest series of collage work. This series is an effective application of hybridization as it combines elements from Western and Eastern cultures to provide a dialogue of biculturalism.

I have been able to adopt my own style and sense of ownership by integrating the different artistic techniques, methods, and materials from two cultures. Furthermore, I have found my voice
through merging Persian traditional symbols with Western influences. I feel privileged to have had the opportunity to represent Persian culture to Western society. This privilege has motivated my work. Though there are many opinions about Iran (the culture, way of life, and religion), I have done my best to illustrate what I see as the true beauty and authenticity of Persian life and heritage.

**Foss, Lindsey**  
**Category:** Health, Nutrition & Clinical Sciences  
**Poster #17**  
**Classification of Infant Vocalizations by Untrained Listeners**  
The purpose of the proposed project is to aid in the development of a “gold standard” for classification of infant vocalizations. Obtaining such “gold standard” will enable clinicians and caregivers to better communicate and enhance accurate interpretation of parent report.  
**Methods:** Forty untrained listeners (with no unique perspective on auditory perception) will be presented with 1) a list of terms (previously generated based on terms used to describe infant vocalizations in clinical and research settings and by untrained listeners) and 2) auditory stimuli of infant vocalizations. The listeners will be asked to select terms from the list that they think best describe the sounds presented.

**Garelik, Sarah**  
**Category:** Three Minute Thesis  
**Werther’s Failed Embodiment: Sentimental Fiction and Embodied Cognition in The Sorrows of Young Werther**  
Cognitive scientists, following the lead of Lakoff, Johnson, and Turner, have identified semantics (not syntax, as previously thought) as the linguistic center for study and shown that embodied notions create image schemata that serve as the foundation for more abstract thought. Embodied cognition presupposes the link between thinking and feeling (what I’ll call sentiment, at its extreme) and the physical body. During Goethe’s lifetime, dualist Cartesian notions posited a mind/body split that ignored their interaction, but sentimental novels like Werther gesture toward a recognition of the link between sentiment and body as well as a wider inclusion of the body as enmeshed in its natural environment. Principles of embodied cognition can help us understand how literature is read and understood, how it’s written, and how characters interact with their own bodies, minds, and environment.  
The Sorrows of Young Werther is the quintessential sentimental novel: its epistolary form shows readers the exuberance of Werther’s emotions and his ultimate inability to regulate these
emotions. Read in light of more recent work in the field of cognitive science, Werther begins to make sense as a failure of embodiment. His preoccupation with sensory experiences calls attention to and entrenches his cognition and sentimentality as embodied. The implications of this embodiment were felt in popular culture across Europe: as the novel rose in popularity, Europeans dressed and acted like Werther, wore a perfume called Eau de Werther, and emulated his death in a rash of copycat suicides known as “The Werther Effect.” These emulations point to the complications posed by embodiment.

Garrett, Jerilyn; Woods, David
Category: Health, Nutrition & Clinical Sciences
Poster #38
A Case Report of Vocabulary Growth in a Child Learning both ASL and Spoken English
This case study describes the initial stages of vocabulary growth across languages in a 2-year, 11-month-old female with delayed language development. The home languages of the child were English and American Sign Language (ASL), with the most-frequent language used with the child reported to be ASL. Her spoken vocabulary was 12 words upon admission to speech-language therapy, while her signing vocabulary was slightly higher. Fitzpatrick, Stevens, Garrity, and Moher (2013) have stated that there is no agreement among clinicians that establishes what is optimal intervention for teaching spoken language to signing children. Other research has shown that when two languages are taught in similar amounts, that balanced bilingualism can develop (Brice & Wertheim, 2004/2005). However, when exposure to one language is limited, language loss can occur (Anderson, 1999). The clinical purpose of tracking the ASL vocabulary was to verify that no language loss was occurring.

Gibson, Jacob; Letzring, Tera; Colman, Douglas
Category: Humanities, Behavioral & Social Sciences
Poster #20
Motivated accuracy rebooted: A conceptual replication and extension
The current investigation aimed to replicate and extend upon the findings of Biesanz and Human (2010), who found that instructing participants to be as accurate as possible moderated the accuracy of personality judgments. Specifically, using the Social Accuracy Model (Biesanz, 2010) — a componential model that provides estimates of both normative and distinctive components of accuracy — that simple task goal increased distinctive accuracy but decreased normative accuracy. That finding was not replicated in the two current samples. Expanding upon the original findings,
more specific task goals (e.g., instruction of elements to which attention should be paid) did not produce reliable increases to normative or distinctive accuracy, nor did they decrease accuracy. In conclusion, utilizing a task goal when judging others likely will not hurt one’s level of normative or distinctive accuracy.

Glossner, Kayla  
**Category:** Biological & Natural Sciences  
**Poster #21**  
**Characterizing the role of hydrologic fluctuation on suspended sediment and particulate organic carbon export in a semi-arid catchment, Reynolds Creek, Idaho**  
In creating robust models of the carbon cycle, quantification of transfer across pools is critical. However, current budgets tend to exclude transfer across the terrestrial-aquatic interface. This underrepresentation of inland riverine carbon export is largely attributed to uncertainty. Ambiguity arises from the stochastic nature of discharge; specifically, within the headwaters of semi-arid regions. To characterize how major hydrologic fluctuation may impact the export of particulate organic carbon (POC), we have determined POC concentrations from suspended sediment (SS) samples collected within four sub-watersheds of the greater Reynolds Creek Experimental Watershed (RCEW).

Goode, Jonathan; Swift, Joshua  
**Category:** Three Minute Thesis  
**AN EMPIRICAL EXAMINATION OF STIGMA TOWARD MENTAL HEALTH PROBLEMS AND TREATMENT USE IN VETERANS**  
Many veterans in need of mental health treatment do not receive psychotherapy. This study investigated the relationship between actual and perceived stigma toward mental health issues and psychotherapy, and attitudes toward treatment seeking in the veteran population.

Heaps, Kiley  
**Category:** Humanities, Behavioral & Social Sciences (A)  
**Poster #32**  
**U.S. Public Lands: Community Interaction within a Remnant of the Western Resource Frontier**  
The United States is currently undergoing a sea change of natural resource and public land policy. The current Federal administration has proposed a number of bills which circumnavigate former
laws established for the protection of the environment and the rights of the citizens. These variety of bills are being introduced with a rapidity that is difficult for the average person to stay abreast, yet the pending success or failure could be paramount to the future of how people can interact with their natural world. This reality is all the more tangible in the western states that retain a high prevalence of public land.

To understand the potential impact that community members may face in the future, my research is designed to explore the level of interaction between people and their environment within the federal land domain. The case study explores a county which is comprised of ninety-three percent federally owned land or land which is considered part of the U.S. public domain. Ultimately the aim of this research is to determine the dependency of community members on the immediate resource environ, specifically where the highest level of U.S. government mediates the resource use. This research is designed to encompass multiple aspects of resource use including subsistence, recreation, and industry employment. Additionally, this study explores local perceptions and interaction with the timber and mining industries in the area. Though situated in Anthropology, the investigation follows a multi-disciplinary approach which considers the multitude of causalities including politics, economics, history, and law. This study also incorporates Geographic Information Systems to analyze the data and produce spatial representations.

For the purposes of this graduate symposium, I would like to utilize the opportunity to present my research project which can then be modeled for use within the community for the Summer 2018 research term.

Hill, Jehan; Marasco, Vincent; Baquet, Sarah; Muirhead, Kathleen; Wallace, Katherine; Elison, Candice
Category: Education, Learning & Training
Poster #39

Self-Efficacy of Counselors in Training Using Multiple Regression

The role of counselor education programs is to train students to become competent counselors by equipping them with necessary clinical skills, knowledge and experiences (Bernard & Goodyear, 2013; CACREP, 2009). There is limited research in counseling literature that examines counseling trainee’s development of self-efficacy across Clinical Mental Health, School Counseling, and Marriage and Family Therapy program areas of study. This research study aims to examine the relationship between predictor variables (location of supervision, supervision accessibility, supervision working alliance, and counseling track) on counselors-in-training Self-Efficacy through use of Self-Estimate Inventory (COSE) (Larson, et al., 1992). A multiple regression test will be
conducted with Master’s counseling students in currently enrolled in internship to examine the predictive power of the previously stated factors in relationship to supervisee’s COSE score. Future implications for research will outline program recommendations for supervision.

Hillam, Jessica; Mclain Verdoes, Maryellen; Lewis, Steven
Category: Health, Nutrition & Clinical Sciences
Poster #11
Knowledge of Autism Spectrum Disorder (ASD) Among Pre-Service Audiology and Psychology Students
Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder that is associated with significant communication, behavioral, and social delays. As with many other neurodevelopmental disorders, early identification and intervention is essential to improve overall outcomes for these children. Many children with ASD are non-verbal or have significant language delays. As a result, children with ASD are frequently referred for a diagnostic hearing evaluation to determine whether a hearing loss is contributing to their delayed development. This often places the audiologist in a unique position where they can be instrumental in the early referral and identification of ASD if they are sufficiently knowledgeable about the disorder. However, not all audiologists have the clinical training and/or educational experiences specific to ASD, making it difficult for them to identify and refer children at-risk for the disorder. The purpose of the current study is to: (1) assess the knowledge of ASD among pre-service audiology doctoral students compared to pre-service doctoral psychology students and (2) to determine self-reported preparedness of doctoral audiology students to work with this population. To measure ASD knowledge, pre-service audiology and psychology doctoral students completed the Knowledge of Autism Spectrum Disorder Scale (KASDS), which consists of 33 true-or-false questions that relate to ASD etiology/prevalence, symptoms/associated behaviors, assessment/diagnosis, treatment, and outcomes/prognosis. The KASDS has been piloted and validated (McClain, Harris, Schwartz, & Haverkamp; in preparation). The intent of this poster is to determine the strengths and weaknesses related to ASD knowledge among pre-service audiology students and to suggest areas that may be beneficial to include in the university training environment.
Hirst, Chloe; Farrer, Hayley; Lundin, Makayla  
**Category:** Education, Learning & Training  
**Poster #25**  
**Idaho State Sports Specialization**  
Sports specialization is a controversial and highly debated topic in the sports realm. The purpose of this study is to examine the prevalence of sports specialization among intercollegiate student-athletes at Idaho State University. This study will address the following questions: (1) Of the athletes participating in a sport program at Idaho State University, how many specialized in a single sport while at the high school level? (2) What reasons do intercollegiate athletes cite as rationale for/not specializing in a single sport while at the high school level?

Johnson, Brooke; Woods, David; Hudock, Daniel; Yates, Chad  
**Category:** Health, Nutrition & Clinical Sciences  
**Poster #3**  
**A Case of Late Onset Stuttering: Analyzed through an Expanded Case History Interview**  
Intro: Ninety-five percent of individuals who stutter begin before the age of 5 (Yairi & Ambrose, 2005). Individual cases of late-onset stuttering are rare and present an opportunity to increase understanding regarding the disorder. The current single case study involved a 14-year-old male experiencing persistent stuttering after sudden-onset. Analysis of an expanded case history interview was used to explore statements of lived experiences and the personal, social, and emotional impacts on the individual’s quality of life.

Johnson, Elisa  
**Category:** Humanities, Behavioral & Social Sciences (A)  
**Carl’s Jr. Shifted Campaign: Literature Review of Corporate Image Repair**  
Carl’s Jr. is known for racy advertisements that objectify women. Many organizations and individuals boycotted Carl’s Jr. in the last 10 years for the depiction of women. Carl’s Jr. changed their marketing strategy March 2017. It is clear with the new campaign Carl’s Jr is departing from the antifeminist approach previously utilized. The campaign clearly illustrates image repair theory. This paper provides a literature review of image repair theory in the communication discipline, specifically corporate image repair. The corporate sphere is one of the most popular contexts for studying image repair (Benoit, 2015). Corporate image repair theory develops defensive messages after the crisis emerges to hopefully resolve it (Benoit, 2015). Image repair is important.
not only for the analysis of Carl’s Jr but for future organizations or corporations that need to repair their image.

Jorgensen, Claire  
**Category:** Education, Learning & Training  
**Poster #5**  
**The Effect of the Discontinuation of Formalized Elementary Physical Education on Classroom Teachers**  
In 2011, the Pocatello-Chubbuck School District (SD25) disbanded its physical education (PE) programming. Like many other school districts who grapple with decisions related to meeting standardized testing requirements and subsequent funding, the decision was made in an effort to increase and reinforce instructional time spent on the core subjects of math, language, and science. This year, physical education returned the weekly curriculum. The purpose of this study was to explore the rationale behind both the removal and reinstatement of physical education classes in SD25 and to determine how its removal directly affected classroom teachers.

Jurkowski, Carl; Finney, Bruce  
**Category:** Biological & Natural Sciences  
**Historic salmon abundance in Situk and Mountain Lakes, Yakutat, Alaska inferred from lake sediment δ¹³C and δ¹⁵N stable isotopes**  
Salmon play an important role in the economic and cultural well-being of Alaskans (Finney et al., 2000; Holtham et al., 2004). Situk and Mountain Lakes, are salmon spawning lakes located 20 km northeast Yakutat, southeast Alaska. Yearly escapement and catch data has been monitored and recorded since the early 1930’s with salmon runs and escapement estimated back to the mid-1910’s using catch data and likely harvest rates (Shaul, 2017, pers. Comm.). Prior to this time, we must rely on proxy records to infer salmon populations, such as from sediment core analysis, the goal of this research. We hope to better understand how salmon populations responded to past changes in glacial advances, and other climatic changes, which have strongly effected watersheds in this region. Understanding trends found in escapement catch data and historic salmon abundance is necessary to implement better management practices (Holtham et al., 2004).
Kim, Wonjeong  
**Category:** Education, Learning & Training  
**Developing ESL Identity In First-Year Composition**

College composition courses in the United States have generally sustained the myth of a monolingual norm which led most college composition courses to be designed based on the assumption of a monolingual environment - mainly assuming English as the primary language. The assumption of a monolingual norm is not only false, but it also causes greater conflicts for international students in terms of building ESL identities and developing academic literacy.

Studies have shown that the myth of a monolingual norm in college composition courses can hinder international students to create positive ESL identities and even lose the opportunity to enrich the classroom environment with diverse rhetorical approaches and cultural context that international students can bring to class. First-year composition courses are especially important for developing ESL identities as they are one of the first encounters that international students have after they enter universities in the United States. Also, writing plays a crucial role for students developing their identities, so the significance of first-year composition courses have to international students becomes more considerable, and it can be an important milestone for international students in their academic careers. I will, therefore, examine the common issues that international students face in first-year composition courses and study the relationship between ESL identities and writing.

Kirkham, Jill  
**Category:** Humanities, Behavioral & Social Sciences (A)  
**Where the Sun Should Not Shine: Record Keepers and the Public’s Perceptions of Idaho’s Public Records Laws and Victim Privacy Rights**

Public record laws, also known as “sunshine laws,” help requesters (usually the press, but can be anyone) cast light on the activities of government. Clashes arise when the rights of the press to information come into conflict with an individual’s right to privacy. Many state legislatures permit the redaction of private information when a public record is released if “its release would be an unwarranted invasion of personal privacy,” but what is classified as an “unwarranted invasion of privacy” is left up to the discretion of the record custodian. Due to this discretion, each record custodian could have a different policy on what is redacted. This research aims to address two important questions. First, what factors influence a record custodian’s policy in releasing victims’ names in a public record request, and second what does the public know about record requests?

Using two original surveys, one of individual record custodians and the other of the public, this project helps us to understand how implementation on a large-scale basis can create different
policy environments that either favor the press or individuals, further highlighting how implementation at the street-level can either uphold the letter or spirit of the law.

Krzyzaniak, Sheherezade; Pedersen, Chloe; Gibson, Jacob; Barclay, Taeg; Letzring, Tera
Category: Humanities, Behavioral & Social Sciences
Poster #41

**Personality Judgment Accuracy and the Role of Psychological Well-Being and Cognitive Functioning**

Personality judgment accuracy involves the ability of a judge to accurately perceive a target’s personality traits. Recent research has investigated two unique types of accuracy: distinctive and normative accuracy. Previous research has found a link between individual characteristics of the judge in the form of Psychological Well-Being (PWB) and Cognitive Functioning (CF) and the ability to make accurate personality judgments. Research investigating the role of these individual differences on the two unique components of accuracy is still limited. The current research investigated multiple components of PWB and CF as moderators of distinctive and normative accuracy.

Lake, Caryn; Ramsdell-Hudock, Dr. Heather
Category: Health, Nutrition & Clinical Sciences
Poster #48

**The Effect of Quality and Quantity of Caregiver Input on Vocabulary Development**

Vocabulary development is strongly impacted by environmental factors. Caregiver language input, specifically the quality and quantity of input, is one key environmental factor proven to directly affect vocabulary growth. Increased quality and quantity from caregiver language input is related to greater vocabulary growth. The purpose of this study is to explore the difference between quantity and quality of caregiver language input and the impact each has on expressive and receptive vocabulary development in a sample of children.
Seasonal Groundwater Influence on Velocity of a Slow Moving, Rotational Landslide from High-precision, Continuous GPS Observation, Salmon Falls Landslide, Idaho

Current research has shown groundwater levels to be an important factor in slope stability, landslide initiation, and continued movement. Case studies provide useful local context of these influences, but deep-seated, rotational slumps are generally underrepresented in current literature in this regard. This study looks at the influence of groundwater on the Salmon Falls landslide, a slow-moving, deep-seated, rotational slump, using high-resolution, continuous GPS observation and groundwater level measurements. Previous research on the Salmon Falls landslide indicated potential seasonal influence on slide velocity, but lacked water level measurements to answer this question.

The Relation Between Time of Day and Behavioral Measures of Impulsivity

Prior literature suggests that time of day affects human behavior, with individuals who prefer evenings over mornings displaying greater trait impulsivity, sensation-seeking, and lack of response inhibition (Caci et al., 2005; Kang et al., 2015). No current study has investigated time of day effects with impulsivity measured through delay discounting (DD). The present study examined the relationship between DD for food and money and the time of day the DD task was administered. Data from an ongoing study with 262 college-age participants were examined using regression analyses. Delay discounting (i.e., k rates) was regressed against time categories (i.e., each four hours grouped into one category). Participants displayed no differences in impulsivity for money (N = 131) and food choices (N = 132) according to time of day (p<.18-.47). Despite prior research, time of time does not seem to significantly affect individuals’ performance on behavioral measures of impulsivity. Controlling for obesity status (i.e., body mass index and percent body fat), age, and gender did not result in significant findings.
Lord, Jonathan  
**Category:** Education, Learning & Training  
**What Makes An Effective Subculture on a Community College Campus?**  
The purpose of this multi-case study was to explore the affective and social factors of individuals within subcultures of three departments on a rural inter-mountain-west community college campus. Academic leadership and organizational culture directly influenced organizational effectiveness (Schein & Schein, 2017). Academic leaders shaped the culture of the college (Blackmore & Blackwell, 2006; Sathye, 2004; Schein, 2010). The influence of an academic leader on his/her subculture (department) affected the overall efficacy of an institution (Spendlove, 2007; Underwood, Mohr, & Ross, 2016; Yelder & Codling, 2004). A subculture that understood the makeup of leadership, and the varied cultures present within it, more effectively lead (Underwood, Mohr, & Ross, 2016), and adapt to change (Hrabowski et al., 2011; Schein, 2010).

Macek, Carolyn  
**Category:** Biological & Natural Sciences  
**Nutrient Dynamics in Constructed Stormwater Wetlands in Semiarid Climates**  
Contaminants associated with urban stormwater runoff have become an increasingly common concern in cities across the United States, increasing the use of constructed stormwater wetlands (CSWs) across climates. Reduction of macronutrients in stormwater runoff is a common goal of many CSWs. Despite this, much of the research on the effectiveness of CSWs at reducing macronutrient levels has been done in temperate climates.

MacNeille, Ruth; Lohse, Kathleen; Smith, Rosemary  
**Category:** Education, Learning & Training  
**Poster #2**  
**Assessing and addressing barriers to the use of active learning techniques at ISU.**  
Active learning is an umbrella term for student-centered teaching techniques that engage students in the learning process. In a metaanalysis of 255 studies, active learning classrooms reduced student failure rates in introductory science, technology, engineering and mathematics (STEM) courses by 55% (Freeman et al., 2014). Despite this and a rich body of scholarship providing evidence that active learning improves learning, traditional lecturing remains the dominant teaching method used and modeled in university classrooms. Cultural educational norms set the foundation for the experience and expectation of both faculty and students in the university system.
and are the root cause for many barriers to implementing student-centered teaching. Time required in the classroom for activities and for preparation, lack of faculty professional training, student resistance to an active role, and limited institutional support or incentive are among some barriers discussed in the literature. We ask what is the level at which introductory STEM courses use active learning strategies at ISU, what barriers exist specifically for ISU faculty to implementing active learning techniques, and can professional development training workshops improve ISU science faculty’s comfort and use of active techniques. We expect that individual ISU faculty implement active learning strategies or run student-centered courses, but on a departmental or institutional level, student-centered teaching occurs at a low rate.

MacNeille, Ruth; Lohse, Kathleen; Sarah, Godsey; Derryberry, DeWayne; McCorkle, Emma; Parsons, Susan; Baxter, Colden
Category: Biological & Natural Sciences
Stream structure at low flow: biogeochemical patterns of intermittent streams over space and time
Climate change in the western United States is projected to lead to earlier snowmelt, increasing fire risk and potentially transitioning perennial streams to intermittent ones. Differences between perennial and intermittent streams, especially the temporal and spatial patterns of carbon and nutrient dynamics during periods of drying, are understudied. We examined spatial and temporal patterns in surface water biogeochemistry during a dry (2016) and wet (2017) water year in southwest Idaho. We hypothesized that as streams dry, carbon concentrations would increase due to evapoconcentration and/or increased in-stream production and that heterogeneity of constituents would increase. We expected these patterns to differ in a high water year compared to a low water year due to algae scour. Finally, we expected that spatial heterogeneity in biogeochemistry would decrease with time following fire.

Madison, Erin
Category: Humanities, Behavioral & Social Sciences
Poster #34
Summary Type Influence on Metacomprehension Accuracy
Metacomprehension accuracy has shown to be poor (Maki, 1998). However, different techniques can be utilized to increase metacomprehension, such as generating keywords (Thiede, et al., 2005) or writing summaries, but only after a delay (Thiede and Anderson, 2003). Much of the literature have used written summaries to increase accuracy (Maki, Willmon & Pietan, 2009; Anderson & Thiede, 2008), but some work has used oral summaries, since they are faster and...
decrease hand fatigue (Fulton, in press). Even though both of these modalities have been used in metacomprehension research, they have been shown in the past to be different (Kellog, 2007). There are several differences between oral and written summaries that might influence overall comprehension.

I plan on testing these two modalities and how they affect metacomprehension accuracy. Students will give spoken or written summaries, and the differences in their metacomprehension accuracy will be examined.

Mahmud, Muhammad Zunnun Ibna Mostafa
Category: Engineering, Physical & Mathematical Sciences

Harvesting Electrical Energy from Potato Processing Wastewater using a Multiple Anode Plate Harvesting Electrical Energy by Microbial Fuel Cell

My Master’s thesis entitled with ‘Harvesting Electrical Energy from Potato Processing Wastewater using a Multiple Anode Plate Microbial Fuel Cell (MAP-MFC)’ is focused on producing electricity from potato wastewater & storing the generated electrical energy. MFC’s are devices that convert chemical energy to electrical energy using microorganisms as catalysts and this device use bacteria to oxidize organic matter and produce electricity. The bacteria (attached to the anode) produce electrons that travel to the cathode (current). Our Fuel cell consists of: anode, cathode, electrolytes, external circuit. We have used EAB (Electrochemical active bacteria) as catalysts into potato processing wastewater. As fossil fuel is very limited and there is not ample amount of it remains to support even the next generation, we must have to have some other alternate solution for power generation like solar and thermal energy from the environment. To decline fossil fuel supply, this kind of project is really good for alternative, diverse, clean and renewable energy systems. Generated electricity by MAP-MFC will be a good source of alternative energy as dependency of fossil fuel will reduce a lot. Our main aim is to store electrical energy in a capacitor and a Lithium ion battery to 3.125 volt and to find out the maximum power output. We can use this energy in remote areas and space (space stations, space ships) too. In this research project, I’m working under Dr. Sato & Dr. Steve Chiu’s supervision. For economic development and advancement, prosperity and global stability of the world, this project’s outcome will play a significant role since there is an opportunity of finding an alternative source of power, this research project is highly appreciable to reduce the dependency of fossil fuel.
Makhal, Abhijit  
**Category:** Engineering, Physical & Mathematical Sciences  
**Grasping Unknown Objects in Clutter by Superquadric Representation**  
In this project, a quick and efficient method is presented for grasping unknown objects in clutter. The grasping method relies on real-time superquadric (SQ) representation of partial view objects and incomplete object modelling, well suited for unknown symmetric objects in cluttered scenarios which is followed by optimized antipodal grasping. The incomplete object models are processed through a mirroring algorithm that assumes symmetry to first create an approximate complete model and then fit for SQ representation. The grasping algorithm is designed for maximum force balance and stability, taking advantage of the quick retrieval of dimension and surface curvature information from the SQ parameters. The pose of the SQs with respect to the direction of gravity is calculated and used together with the parameters of the SQs and specification of the gripper, to select the best direction of approach and contact points. The SQ fitting method has been tested on custom datasets containing objects in isolation as well as in clutter. The grasping algorithm is evaluated on a PR2 robot and real time results are presented. Initial results indicate that though the method is based on simplistic shape information, it outperforms other learning based grasping algorithms that also work in clutter in terms of time-efficiency and accuracy.

Mayer, Rachael  
**Category:** Humanities, Behavioral & Social Sciences (A)  
**Entropy**  
My work references communities, social networks, and systems. I draw influence from landscape and topography to communicate ideas around the social structures we influence and are influenced by. Drawing heavily on craft and anthropological theories, I contextualize my work within these disciplines and use installation and experience-based work to further these ideas around community and constructed spaces.

McDonald, Jennifer; Pederson, Chloe  
**Category:** Humanities, Behavioral & Social Sciences  
**Poster #14**  
**Trait Mindfulness as a Moderator of Judgmental Accuracy of Acquaintances**  
State mindfulness is an awareness of the present moment without judgment. As a trait, mindfulness is exhibited by individuals consistently across time and situations. Characteristics related to trait mindfulness, such as psychological and social well-being, are also related to being...
highly judgable in terms of personality traits. However, the link between trait mindfulness and judgability has not been empirically tested. Therefore, it was predicted that 1) judgments of trait mindfulness from acquaintances of at least 6 months would be significantly related to self-ratings of mindfulness, and 2) accuracy of acquaintance ratings of target’s self-reported personality traits and personal values would be moderated by the targets’ levels of trait mindfulness.

McKenna, Morgan  
**Category:** Humanities, Behavioral & Social Sciences  
**Poster #** 16  
**Stable Isotopes and Ancient Maya Diet**  
The purpose of my project is to try to better understand the diet of the Maya that lived at two different sites in the Sibun River Valley in Belize during the Late Classic to Post-classic periods by creating an isotope-based food web. A food web can be made by comparing the stable carbon and nitrogen isotope ratios of the plants and animals native to the location of interest to the ratios found in the archaeological human skeletal remains. Because different types of plants and animals have different isotopic signatures, we can infer which resources were eaten, and to what extent.

Meese, Graham  
**Category:** Biological & Natural Sciences  
**Farmers, Fences and Fine Sediment: Using long-term water quality data and aerial imagery to quantify the impact of best management practices in Marsh Creek, ID**  
The dominant source of fine sediment impairing water quality in the Portneuf River comes from Marsh Creek, an agriculturally-impacted tributary. Since the 1980s, a range of initiatives and conservation projects have aimed to reduce the sediment load in Marsh Creek, but like many stream restoration efforts, quantitative post-project assessment is lacking. We argue that this assessment and the detection of change is complicated by numerous factors. These include the persistence of legacy effects, the quality and representativeness of pre-restoration data, and the lag time between completed projects and measurable improvements in water quality.
Merrill, Katherine  
**Category:** Humanities, Behavioral & Social Sciences (A)  
**"We Two": A Sympathetic Reading of "The Wife's Lament"**  
The Wife’s Lament is considered one of the most enigmatic Old English poems and thus it has been interpreted in radically different ways. The variation of these interpretations depend upon how we interpret crucial passages, or cruxes. One of the more strained interpretations is that the narrator is not, in fact, a woman, but rather a man, perhaps a retainer, lamenting his lord’s departure. Another unnecessarily strained reading is that the narrator is dead, an interpretation supported in part by her description of her isolation and her residing in the ground under an oak. Some scholars have even argued that the poem is a Christian allegory for Christ and his Church. These are relatively dated criticisms, but they clearly demonstrate the extent to which readings vary. Most of the recent criticism on the poem, however, focuses on a series of questions about the number of men the narrator is talking about, her attitude towards him (or them), and the order of events in her account.  
My interpretation with regards to these questions is that the narrator is indeed a woman and fully alive, that the poem is not allegorical, and that there is only one man in the poem: the narrator’s husband. By examining a number of key textual cruxes, this essay aims to suggest a sympathetic interpretation of the poem by arguing that the narrator’s husband is not cruel, that the two central characters are not in conflict, and that the poem ultimately parallels both the woman’s and her departed lord’s narratives as she laments both her husband’s and her own exile and their subsequent separation. As we translate, we can best understand the weight of her sorrow, as well as understand the narrative itself, if we consider that she and her husband actually do care for one another.

Moody, Daniel; Hoskin, Anthony  
**Category:** Humanities, Behavioral & Social Sciences (C)  
**The Link Between Prenatal Testosterone and Self-Reported Athletic Ability**  
In recent years, the 2D:4D digit ratio has been used frequently as a proxy of fetal testosterone exposure. The present study investigates the relationship between digit ratio and athletic ability.
Childhood and Adult Sexual Violence as Predictors of Current PTSD and Depression in Incarcerated Women

Research supports a strong association between trauma exposure and mental health symptomatology. Samples of incarcerated women have been shown to have extensive physical and sexual trauma histories. Past studies have explored the relationship between childhood sexual victimization and mental health in incarcerated women. Tripodi and Pettus-Davis (2013) found that women who experienced childhood sexual victimization were almost four times more likely to be hospitalized for mental illness than women who were not victimized as children. Similarly, Lynch and colleagues (2012) found high rates of adult victimization and psychopathology, with 98% of their sample experiencing physical or sexual violence in the year prior to incarceration. In non-incarcerated sexual assault survivors, women were 1.29 times more likely to report experiences of sexual violence with each reported symptom of PTSD (Messing et al., 2014). The present study aims to compare mental health outcomes for incarcerated women with histories of sexual victimization. Specifically, it is hypothesized that experiences of sexual violence will predict comorbid current PTSD and depression in these women. Further, analyses will examine whether childhood or adult sexual victimization is a stronger predictor of these current disorders.

Participants (N = 152, randomly selected incarcerated women) completed a series of questionnaires relating to trauma history, current PTSD, and depression. Preliminary analyses revealed that 39% women met current DSM-5 criteria for PTSD, and nearly 80% of the women were survivors of sexual trauma. Using multivariate regression models, we will examine rates of comorbid PTSD and depression among this sample. We will then separately examine the predictive power of both childhood sexual violence and adult sexual violence for current PTSD and depression. This will inform mental health assessment and intervention for trauma victims. Future research could include a broader sample of incarcerated women, as well as compare access to mental health treatment post-victimization.
be plagued three problems: given a constant conjunction of events $c_1$ and $e$ (which occur in that order), regularity analyses can assert that $c_1$ causes $e$ only if a cause is required a priori to precede its effect—this is the problem of causal ordering; a case of $c_1$ causing $e$ and then later $f$, is indistinguishable under regularity analyses from $c_1$ causing $e$ and then $e$ causing $f$—this is the problem of epiphenomena; if $c_1$ and $c_2$ occur at the same time regularity analyses cannot explain, given both are possible causes of $f$, how to distinguish which is the actual cause --this is the problem of pre-emption. Lewis claims his counterfactual analysis gets these three cases correct, but to date he has merely made this claim, and not given any convincing proof that this is so. In short, his analysis relies making use of what he calls a “comparative similarity function” with which he orders all the possible worlds, in an order of decreasing similarity with the actual world. Evaluation of the claim that even $c$ causes $e$ is reduced to evaluating the counterfactual implication $c \square \rightarrow e$ given the ordering of possible worlds induced by the comparative similarity function. That is, $c \square \rightarrow e$ is true on this ordering if and only if in the possible world closest to the actual world where $c$ is true, $e$ is also true. I hope to accomplish no more than to place some limits on the kind of similarity functions that can be used to induce the ordering across possible worlds necessary to conduct a counterfactual analysis of causal claims.

O'Neal, Niki
Category: Business, Economics & Public Administration/Health, Nutrition & Clinical Sciences
Poster #23
Medical Laboratory Scientists and State Licensure: Perceptions reported by Physicians, Students, and practicing MLS Professionals in Idaho
The purpose of the study is to investigate the perceptions regarding the implementation of professional licensure in the state of Idaho for Medical Laboratory Scientists (MLS). Study participants will include students from college campuses affiliated with Idaho State University and MLS professionals employed in laboratory departments from clinics and pathology agencies in Idaho in the Spring of 2018. Participants will be provided literature and questioned in small focus groups on factors that influence their choice of either supporting or opposing professional state regulation and legislative efforts supporting policy. This study will add literature to the lacking body of knowledge for the clinical community’s support or opposition of state-regulated professional standards of MLS. If valuable results are obtained, a request for additional similar research will be made to the MLS community in hopes that each state may expand research as a means of improving implementation of public policy for the MLS profession.
Parker, Charles  
**Category:** Three Minute Thesis  
**Mediators and Moderators of the Relationship between Working Memory and Reading Comprehension**

Research (e.g., Daneman & Merikle, 1996) has consistently found correlations between working memory span (WM) and higher order cognitive function (HCF), including reading comprehension. However, reasons for why individual differences in WM span manifest across HCF tasks calls for further investigation. The ability to resist proactive interference and inhibitory control has been implicated as two possible mechanisms that underlie individual differences in WM (e.g., Kane, & Engle, 2000; Friedman and Miyake, 2004). Dunlosky and Kane (2007) argued that the ability to engage in strategic behavior during completion of a span task may affect individual differences in WM span. Additionally, Turley-Ames and Whitfield (2003) found that the relationship between WM and HCF could be strengthened through strategy use. Resistance to proactive interference, inhibitory control, and metacognition were proposed mediators while strategy use during the span task completion was proposed to moderate the relationship.

Pascali, James  
**Category:** Humanities, Behavioral & Social Sciences (B)  
**Poster #1**  
**Single Mothers in Action: An Assessment of Familial Socialization Toward**

Extant literature has established a relationship between being a member of a minority group and higher levels of support for women’s rights. This relationship can be seen as a strong example of intersectionality and cross-identity support among groups because there is the potential for increased awareness and empathy expressed toward groups experiencing similar patterns of discrimination and societal oppression. However, among the existing literature, the socializing effects of family dynamics, specifically growing up in a single-mother environment, has not yet been examined. This research seeks to understand whether growing up in a single-mother household has the potential to increase one’s support for women’s rights and whether this could be assessed as a potential factor for increased support within minority communities. Preliminary findings suggest that this link exists and shed light on the causal dynamic between support for women’s rights through familial socialization within minority communities.
Pearsall, Chadwick  
**Category:** Humanities, Behavioral & Social Sciences (B)  
**The Immigration Debate on Twitter**  
This paper seeks to answer the following research questions:  
1.) Do the National Immigration Law Center (NILC) and Federation for American Immigration Reform (FAIR) craft their own narratives specifically for Twitter or do they borrow narratives from media outlets?  
2.) Does the frequency of narrative usage change or does it stay relatively consistent over time?  
3.) Do the NILC and FAIR use similar types of narrative characters on Twitter?

Pehrson, Joseph  
**Category:** Humanities, Behavioral & Social Sciences (B)  
**The Idaho Falls Art Guild - Art Movement?**  
In 1948 four artists with very different backgrounds came together in Idaho Falls Idaho to form an organization that would impact the eastern Idaho region for years to come. Whether it was a club in guild name, or a guild, or a local arts organization or as some have speculated an actual ‘school’ or ‘art movement’, the impact of the Idaho Falls Art Guild has endured for generations and left a lasting legacy for the entire East Idaho area. Today the Eagle Rock Art Guild as it has become known, “is the oldest active art association in Idaho.” In the modern age there have been many ‘Schools of Art’ or ‘Art Movements’. From the internationally known New York School in the 50s and 60s to the more obscure Northwest School of the 30s and 40s and all along the spectrum, art movements have started when art making and art-loving people come together. Either formally or informally history has a way of finding these movements and qualifying them through recognition. This is the goal of this research. Can the Idaho Falls Art Guild and resulting legacy be recognized as a ‘School’ or ‘Art Movement’?

Perschon, Bailey; Robertson, Stephen; Rasmussen, Erin  
**Category:** Humanities, Behavioral & Social Sciences  
**Poster #6**  
**The Relationship between Subjective Hunger and Delay Discounting for Real versus Hypothetical Outcomes**  
Delay discounting, a measure of impulsive choice, is the manner by which the subjective value of a specific reward (e.g., money, food) decreases as a function of delay to its receipt. Research on delay discounting among humans uses hypothetical rewards to establish individuals’ rates of discounting. While research comparing hypothetical and potentially real monetary outcomes
suggests that these rewards are discounted similarly, it’s unclear whether these findings generalize to food. Furthermore, research suggests that subjective ratings of hunger do not predict discounting for food rewards. However, there are only several studies that have explored this.

Peterson, David  
Category: Humanities, Behavioral & Social Sciences  
Poster #28  
Queer Families: The Development of LGBTQ Communities in the United States, 1900 - 1945

The word family often comes with a sentiment of shared experience and history. However, this is rarely the case with LGBTQ people. Gerard Koskovich, a founding member of the GLBT Historical Society in San Francisco, explains that “LGBTQ people customarily are born into families that have little or no connection with lesbian, gay, bisexual, and transgender life. While growing up, they have not benefited from hearing stories at home that reflect their emerging same-sex desires or their sense of a gender that differs from the one assigned to them at birth” (Koskovich 04-2). In the first part of the twentieth century, gay and lesbian people began to seek out and create their own communities, forming bonds that did not fit the socially accepted definition of family. This poster details how these communities formed and the role they played in the development of LGBTQ identity and the later struggle for LGBTQ rights in the United States in the twentieth century.

Peterson, David  
Category: Humanities, Behavioral & Social Sciences (B)  
March of the Mattachine: Homophile Activism to Gay Liberation in Postwar America, 1945 to 1970

It is often stated that the modern lesbian, gay, bisexual, transgender, and queer (LGBTQ) rights movement began in the summer of 1969 after a routine police raid on a gay bar in Lower Manhattan. This perception can be at least partially attributed to the Pride parades that are held annually around the world in commemoration of this event. While it serves as a rallying banner for LGBTQ and minority rights, the narrative that gay liberation began at Stonewall is fundamentally ahistorical. The events at the Stonewall Inn did not occur in a vacuum. The history that culminated in the Stonewall Uprising is illustrated by the stories of activists that sought equality and dignity decades before the NYPD raided the Stonewall Inn. The discussion centers on the contributions, successes, and failures of these groups that helped thrust gay and lesbian issues into American political and social discourse in the face of obstacles.
defined by Cold War Era policies, especially those of the Mattachine Society. This presentation brings visibility to those that paved the way for the success of the movement after Stonewall and adds to the growing body of LGBTQ history the community has been fighting to reclaim.

Rapp, Marisa  
**Category:** Three Minute Thesis  
**The Process of Becoming a Gatekeeper in Counselor Education**  
Counselor educators and clinical supervisors are often faced with trainees whose professional performance fails to meet academic, clinical, and dispositional standards (Brown-Rice & Furr, 2016; Foster & McAdams, 2009) and are called to intervene when students are not making progress toward professional competency (ACA, 2014; Freeman, Garner, Fairgrieve, & Pitts 2016). Counselor educators and clinical supervisors have a direct responsibility in protecting quality of client care through their role of gatekeeper. Gatekeeping practices in counselor education have become more visible in current literature as counselor impairment continues to be a significant concern for the mental health professions (Brown-Rice & Furr, 2015; Lumadue & Duffey, 1999; Rapisarda & Britton, 2007; Rust, Raskin, & Hill, 2013; Ziomek-Daigle & Christensen, 2010). This qualitative study aims to explore the process that counselor educators and supervisors progress through in becoming a gatekeeper.

Rashique, Utsa; Ebrahimpour, Dr. Arya; Mashal, Dr. Mustafa  
**Category:** Engineering, Physical & Mathematical Sciences  
**Poster #36**  
**Finite Element Modeling of an Alternative Bridge Deck Connection Method in Accelerated Bridge Construction**  
The Idaho Transportation Department (ITD) are proposing a new connecting material and bridge deck connection detail in Accelerated Bridge Construction (ABC) method to reduce construction time and cost. As a part of the project, Finite Element (FE) models based on experimental results of pull-out tests and beam bending tests using the proposed closure pour material and splice configuration of headed reinforcing bars are to be developed. Based on these models, an FE model of Bridge Deck Bulb-T Girders is to be developed to investigate the behavior and efficacy of the proposed method with a single wheel standard truck load acting on the closure pour section.
Riley, Leila; Fauple, Natalee; Blair, Brooke  
**Category:** Education, Learning & Training  
**Poster #35**  
**International Student-Athletes in the Intermountain West: Motivations, Decisions, and Opportunities**  
The purpose of this study was to explore the motivations of international student athletes (ISAs) playing their sport through an intercollegiate athletics program in the United States of America (USA).

Ritter, Jeanna  
**Category:** Health, Nutrition & Clinical Sciences  
**Poster #15**  
**The Feasibility of Script Based Audio-Visual Speech Entrainment for the Treatment of Nonfluent Aphasia**  
Stroke is the fifth most commonly occurring disease in the United States (Mozaffarian et al., 2016). Between 25-40% of stroke survivors are affected by an impairment in language abilities called aphasia. Nonfluent aphasia is characterized by verbal output that is limited to short effortful phrases (National Aphasia Association, 2011). This pilot study implemented a single-subject design to study the feasibility of using a therapy technique that incorporates audio-visual stimulation (e.g., Fridriksson, 2009; Fridriksson, 2012) to improve verbal output during the production of personally relevant scripts.

Rodriguez, Luis; Rasmussen, Erin; Lee, Yaeun; Robertson, Stephen  
**Category:** Humanities, Behavioral & Social Sciences (C)  
**Stability of delay discounting values for food and money rewards**  
Delay discounting (DD), a facet of impulsivity, has received increased attention in the empirical literature. DD refers to the decrease in subjective value in a reward as delay to its receipt increases. The rate at which one discounts a reward is typically referred to as a k value. With monetary rewards, k values demonstrate stability across minutes, days, months, and even years, suggesting trait-like properties. There have been fewer studies demonstrating the stability of k values for different commodities such as food. Previous research assessing stability of k for food across multiple time points have examined differences in days but not minutes within a single session. The purpose of the present study was to examine the stability of k for food outcomes over minutes within a single session.
Teaching English through Community Engagement

Educators must choose between near-countless options when assigning work to help students learn course material. My research draws on specialized essays I had my students write in two sections of English 102—one online and one face-to-face—for which I received IRB research approval. The three assignments require students to become involved in three separate local groups: firstly, an unfamiliar club/organization/business of their choosing which they’ve wanted to become involved with; secondly, professionals, educators, and students involved in their major or future field; lastly, their state government and those involved in local political issues. My hypothesis is that by encouraging students to interact with the community in ways that make them good citizens, university professors can accomplish educational goals, improve student growth, and help local communities reach their goals, whether through online or face-to-face instruction.

Friendship v. Faith: How Mormon College Students Manage Beliefs About and Interactions with Gay and Lesbian Persons

One of the biggest areas of sexuality-related conflict for conservative religious persons revolves around homosexuality and related topics such as same-sex marriage and various anti-discrimination policies. In this research, I am specifically interested in the experiences of conservatively religious college students and how they negotiate the conflict between having religious beliefs that condemn homosexuality and having relationships with gay and lesbian family members and friends.

The Gender Gap in Golf: What is Being Done to Bridge this Gap?

The purpose of this qualitative study is to explore the gender gap in golf in Southeast Idaho and to research if any actions were being taken to bridge this gender gap amongst the players at public or private golf courses in Southeast Idaho. Studies have shown that there is wide gender gap when it comes to golf, and one main theory supporting the reasoning is the Gendered Social
Structure (GSS) theory; however, it has been reported that the participation percentage of females has increased over the last five years. After conducting research, the results show that the gender gap in golf was very apparent to the head golf professionals at their respective courses in Southeast Idaho. The head professionals interviewed at the golf courses in Southeast Idaho stated they have been taking actions in order to close this gender gap in order to improve participation, however it was found that only the public golf course had seen an increase in female participation in golf. It was found that even though the courses had implemented programs to combat this gender gap the ratio of males to females at the courses in Southeast Idaho are still far below the average levels.

Shrestha, Kshitij; Groome, Dr. James R  
Category: Biological & Natural Sciences  
Poster #47  
Screening of knockdown resistance (kdr) mutations in voltage gated sodium channel of mosquitos found in Bannock County, Idaho  
Vector control programs all over the world use pyrethroids as the first choice insecticide for controlling mosquitos. Pyrethroids are known to bind to the voltage gated sodium channel and exhibit a knockdown effect. However, extensive use of pyrethroid can cause mosquitos to develop resistance. Knockdown resistance (kdr) mutations of several aminoacids, known to be the binding site for pyrethroids, reduce or abolish the binding affinity of pyrethroid to the sodium channel thus making pyrethroids ineffective for vector control. Therefore, it is important to regularly monitor the field mosquito populations for knockdown resistance mutations (Dong et al, 2014). The main goal of this study is to screen the domain II of mosquito voltage gated sodium channel for the identification of any known or novel mutations that are associated with pyrethroid resistance in mosquitos.

Smith, Kathleen; Pemberton, Shelby; Lawyer, Steven  
Category: Humanities, Behavioral & Social Sciences  
Poster #30  
Reactions to Trauma-Focused Research in Incarcerated Women  
Institutional Review Board (IRB) committees and researchers often are concerned that research using trauma survivors may harm participants who may experience distress during research on traumatic experiences. Trauma research may involve asking participants to disclose trauma(s) via questionnaires or interviews, but may also involve procedures measuring participant responses to visual or auditory cues that trigger trauma-related responding. Current trauma-focused research
suggests that some participants report strong negative emotions or unanticipated distress, yet the majority of participants in studies on trauma-related research including refugees, college student, veterans, survivors of childhood abuse, and partner violence have reported positive experiences and do not regret or negatively evaluate the research experience. However, no research has examined how one of the most vulnerable populations “traumatized female inmates” respond to trauma-related research.

**Stalder, Sarah; Hale, Rebecca; Crosby, Benjamin; Baxter, Colden**

*Category: Biological & Natural Sciences*

**Metabolism in and agricultural stream: Impacted riverscapes retain longitudinal complexity**

Stream metabolism is an integrative measure of ecosystem function which is both a responder to and a driver of shifts in overall stream health. While metabolism is well understood in temperate systems, we know less about the spatial and temporal variability of metabolism in semi-arid regions. Marsh Creek, an agriculturally impacted stream in southeastern Idaho, is characterized by high turbidity, yet is still highly productive within the growing season.

**Stoddard, Sadie; Tarp, Helen**

*Category: Health, Nutrition & Clinical Sciences*

**Poster #45**

**Impact of Soil Transmitted Helminths**

Vector-borne diseases such as scabies and soil transmitted helminths (STH) or worms are categorized by the World Health Organization (WHO) as neglected tropical diseases (NTDs) which the WHO designates as “a diverse group of communicable diseases that prevail in tropical and subtropical conditions in 149 countries — affect more than one billion people and cost developing economies billions of dollars every year”. The WHO outlines that populations living in poverty, without adequate sanitation and in close contact with infectious vectors and domestic animals and livestock are those who are worst affected. (“WHO | World Health Organization, 2017). These communities of Americas, China and East Asia, and Sub-Saharan Africa are the most commonly affected (Saboyá et al, 2013).

The most common helminth infections are caused by roundworms (Ascaris lumbricoides) infecting 1,221 billion people, whipworms (Trichuris trichiura) infecting 795 million, and hookworms (Necator americanus and Ancylostoma duodenale) infecting 740 million (Saboyá et al, 2013). They function by infecting the intestine and are transmitted via contaminated soil.
The Physician Assistant Program at Idaho State University participates in a short term medical mission (STMM) located in the Dominican Republic yearly. A majority of the exams performed include some variation of a complaint of parasites, a diagnosis of parasites, and administration of albendazole with multivitamins.

Current research suggests that current interventions do not provide the proposed and needed relief and improvement from STH infections. The regular treatment against helminth infections for its immediate and long-term benefits have often been encouraged. A recent review by Cochrane Infectious Disease Group finds that routine treatment of children in areas where STHs are common has effects on weight gain, but it is not a consistent find between trials. Particularly, the “results from the combination of two trials that lasted more than one year and used albendazole showed no difference between treatment and placebo groups for measures of mean weight, and the mean weight change of 120g was not significant. In regards to cognitive performance, results were inconclusive as the interpretation of the results related to school performance were difficult to truly decipher (Dickson, Awasthi, Williamson, Demellweek, & Garner, 2000).

Considering the results from this review that suggests that there is low quality evidence of overall improvements of health from deworming, why continue therapy and interventions? Data and current peer reviewed journals will be used to identify gaps in current therapy, distinguish lack of research in the area, and construct intervention programs for vector-borne disease on a local and global level.

Swann, Hillary; Burgett, Nicholas; Becker, J.J; Funk, S.K; Raveling, A.R; Schiele, Nathan; Brumley, Michele
Category: Humanities, Behavioral & Social Sciences
Poster #22
The Relationship Between Weight-Bearing Locomotion and Tendon Characteristics in Rats: Postnatal Development
Factors involved in the regulation of normative tendon development are largely unknown. The aim of the current study was to examine relationships between specific locomotion and posture patterns and tendon characteristics during postnatal development in rats.

Tallmon, Ryan
Category: Humanities, Behavioral & Social Sciences (C)
Community & Faith in Bronte’s Jane Eyre
Literary critics have widely debated how Christianity is presented in Charlotte Brontë’s Jane Eyre. Many have entered this conversation through a feminist perspective, highlighting Brontë’s
subversion of the patriarchal Christianity she encountered in nineteenth century England. Some critics have determined that Brontë flat-out discredits Christianity as an institution; others, such as Jennie- Rebecca Falcetta, Susan VanZanten Gallagher, and Emily Griesinger, argue that Brontë is correcting a flaw in the church while remaining within it herself. They suggest that Brontë critiques the rigidity, suppression of emotion, and over-emphasis upon doctrine latent in the evangelical church of her day.

My investigation of Christianity in Jane Eyre emerges alongside these authors, affirming that Brontë is not subverting Christianity altogether, but only a certain brand of it. Where my research departs from previous approaches is in its unique attention to the role of communities in the development of Jane’s theology, which has often been viewed in light of her individual decisions, without fully acknowledging the influence of other characters upon Jane’s spiritual development. In contrast to the view that Jane Eyre depicts the progression as a self-determined woman, I underscore the importance of Jane’s relationships with others, encounters that mold her faith into its unique form.

Through the lens of intersubjectivity, the understanding of self through relationship with others, we gain a more accurate picture of Jane’s theology. Because of the value that feminism places upon community, rather than individualism, it is fitting to examine the novel through the lens of relationality, and provides us further insight into the novel as both a feminist and religious text. My research also provides insight for the American evangelical church of the 21st century which, like the church of Brontë’s day, often posits faith in an overly individualistic and prescriptive manner.

Tandukar, Sabin; Dhamala, Anupama; Lin, Wilson
Category: Engineering, Physical & Mathematical Sciences
Process/Plant simulation through implementation of FFT/IFFT in LPC 1768
Simulation of systems is a vital part of any industry today. As more complex systems are built, the cost of prototyping and optimization has increased. Simulation allows a low cost preliminary testing of the final system.

A system can be analyzed through its response to various kinds of inputs. Two types of system response can be analyzed: Frequency and Transient Response. Frequency Response provides information about the behaviour about the system under sinusoidal input of a range of frequencies. Transient response provides the information about system response under different kind of inputs such as step, impulse, ramp, etc. Each of the input provides different information regarding the system.
Theoretically, frequency response can be calculated using Fourier Transform and transient response using convolution (assuming impulse response is known). A Fourier Transform samples a time domain data of a signal and calculates its sinusoidal components of different frequencies. Fourier Transform can also be used to calculate the transient response of the system thereby skipping convolution.

For discrete applications, Discrete Fourier Transform (DFT) is used. Fast Fourier Transform (FFT) computes DFT or its inverse (IFFT) by reducing the DFT computation complexity of $O(n^2)$ to $O(n\log(n))$.

Traditionally due to complex computations required for FFT (and IFFT), it is implemented on computers. This project aims to implement FFT(and IFFT) algorithms in an embedded system and calculate system response for SISO and MISO systems. Further work is also discussed.

We first start by converting one of the most common FFT algorithms, Cooley-Tukey algorithm, into a C program for LPC1768 to be implemented through the mbed online compiler. The program is then used for calculating the frequency and transient response of systems. We then, summarize the program design used for SISO and MISO system response calculation. Finally, operation of the system with real world data is discussed.

**Tandukar, Sabin; Dhamala, Anupama; Lin, Wilson**

**Category:** Three Minute Thesis

**Implementation of FFT and IFFT algorithms in NXP LPC1768 for plant/process simulation**

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**Thomas, Joseph**

**Category:** Biological & Natural Sciences

**Hydrologic and Environmental Variability of the Past 7,500 years at Morrison Lake, MT**

Lacustrine sediment core material from Morrison Lake, Montana provides a valuable record of environmental and climatic variation over the past 7,500 years. Morrison Lake is a groundwater dominated lake with significant authigenic calcium carbonate (CaCO3) sedimentation. Stable oxygen isotopic analysis ($\delta^{18}O$) of authigenic carbonate sediment is fundamental to the study of paleoclimatology and provides insight into hydrological variability throughout the sedimentary record. Morrison Lake exhibits significant evaporative effects which imparts a drought duration and variability signal into the $\delta^{18}O$ record and allows for the lake sediment record to provide valuable information about precipitation variability in the northern Rocky Mountains during the Holocene. The core was sampled at one centimeter increments, homogenized, bleached, screened and rinsed to collect the fine grained authigenic fraction of the carbonate sediment. The samples were then freeze dried and weighed for analysis in an isotope ratio mass spectrometer (IRMS) utilizing the gas bench front end. Additional analysis including stable carbon ($\delta^{13}C$), stable nitrogen ($\delta^{15}N$) and bulk C/N ratios of the organic fraction of the sediment provides additional support to the $\delta^{18}O$ record. Identification of two volcanic tuff layers contained within the core provides a foundation for the calculation of sedimentation rate and the development of an age model, future 14C data will provide additional constraints for this age model. Preliminary results presented here indicate an increase in the average volume of precipitation over the past 7,500 years at Morrison Lake, with noticeable deviations or potential drought events. Data analyzed from Morrison Lake agrees with other lacustrine records of Holocene climate in the northern Rocky

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Mountains and provides valuable additional data to the growing body of work attempting the characterize Holocene climate variability through the analysis of authigenic CaCo3 records.

**Thompson, Aaron**  
**Category:** Engineering, Physical & Mathematical Sciences  
**Optimization of a Neutron and Gamma Ray Layered Shield for Hot Cells Containing Used Nuclear Fuel**  
Construction of hot cells at facilities working with used nuclear fuel takes large amounts of concrete to provide the shielding from the radiation produced by the fuel. The premise for how much concrete to use is based on previous experience. Not enough concrete? Just add more and make the walls of the hot cell thicker. Although much research is performed on various radiation shields and shielding materials, no one has looked into changing the method of shielding hot cells by use of multi-layered shields. This work discusses the opportunity to use multiple materials to provide a layered approach to shielding hot cells against various types of radiation.

**Treasure, Emily**  
**Category:** Humanities, Behavioral & Social Sciences (C)  
**An Ecocritical Study of the Pox: Its Victims and Scapegoats in Madame de Sévigné**  
An ecocritical lens can be applied to the letters written by Madame de Sevigne of Louis XIV's court in the late 17th century in order to produce a qualitative study of the spread of syphilis. Using this focus on syphilis, which was commonly called "the pox," also brings new insight to Sevigne's letters to her daughter--whose entire family was infected. It is noteworthy that in the rhetoric of both physicians and patients of the 17th century, women were often treated as the cause of the disease even when they were secondary victims and less likely than their male counterparts to receive treatment.

**Udy, Braeden; Kirkham, Jill**  
**Category:** Humanities, Behavioral & Social Sciences (B)  
**Challenging Idaho Go-On Rates: New Methods in Discovering Better Measurements for Post-secondary Achievement**  
We will examine what factors are contributing to Idaho's 50th place in the country in terms of go-on rates. Currently, there are no federal high school graduation requirements, states set their own graduation requirements, however individual school districts have varying standards, and many state departments of education do not collect data from their school districts or are even aware of
what their graduation requirements are. Due to the lack of consistent graduation requirements and variation in GPA, colleges, and state education departments rely more heavily on standardized test scores to measure student performance. This emphasis on standardized testing results in decreased teacher and student autonomy, questionable student mastery, and a general lack of educational purpose. To test education apathy, we looked at grade inflation by comparing the mean GPA of 2017 graduates for each school district in Idaho to their mean SAT scores. We hypothesized that districts with higher grade inflation will have lower go on rates. Through our research, we discovered that one of the greatest determinants that influence grade inflation is a poor county health score, which will be discussed. Ultimately, go on rates have no statistically significant influencers of go on rates in Idaho. We argue that factors like percentage of the population with a high school diploma, income comparison across states adjusted to the standard of living, and graduation inflation for states with at least 90% of students taking the ACT are more robust factors to observe post-secondary matriculation. Data and means will be shown to back up research.

Udy, Braeden
Category: Humanities, Behavioral & Social Sciences (C)
Modernity and Sexual Identity: Identity Crisis in Louis Owen’s Bone Games
Presentation
My research looks at the changing perspectives of sexuality and gender identity and expression in the 21st-century, and Native American culture specifically. Through the character of Alex Yazzie, I will argue how he symbolizes a progressing belief system, especially in the Native American culture. I will also argue how he represents the modernizing of the Indian tradition and the changing identities that are growing from a shifting society. Through the text, we will examine the ways characters sexually identify, and whether or not that aligns with their gender expression. Cultural interpretations of the Native American transgender experience, or "berdache", will also be discussed and compared to the characters in Owen’s novel. The masculine and feminine will be discussed and their broader implications of identity, especially Native American identity, and the place of the masculine and feminine in modernity.
Valencia, Bea  
Category: Education, Learning & Training  
Poster #29  
Globalization of Graduate Programs  
The concept of globalization is to increase the awareness of societies across the globe in an effort to impact factors such as politics, and culture. When this concept is applied to education, we experience the influx of international students matriculating in our educational systems both at the graduate and undergraduate level. In this presentation, the authors will provide a detailed analysis of the types of online learning platforms that currently exist, the benefits of globalization in graduate education will also be reviewed in greater details. Consequently, the authors’ intent is to start a dialogue that will change the narrative on the integration of international students in graduate programs.

Warren, Carley  
Category: Health, Nutrition & Clinical Sciences  
Poster #31  
Quantity and Quality of Infant Vocalizations as they relate to Later Vocabulary Development  
The purpose of this study is to characterize the relationship between the quality and quantity of infant vocalizations and expressive and receptive vocabulary development in early childhood. The long-term goal of the present work is to determine predictors of language development and how clinicians can meaningfully intervene earlier, in the prelinguistic stage, to promote language development and aid in future social and academic success.

Wehrs, Katherine; Crosby, Benjamin  
Category: Biological & Natural Sciences  
Poster #33  
Do Knickpoints 'Unzip' watersheds?  
Longitudinal observations of terrace and hillslope response to incision along the South Fork Eel River, CA  
River response to changes in climate and relative base level often leave behind a legacy of transient landforms that enable the interpretation of past events. The dominant paradigm is that base level fall initiates a wave of mainstem incision that progressively transmits change upstream. Mainstem-adjacent hillslopes coupled to the channel subsequently respond as their toe slopes are
steepened. To test this paradigm, we first use a longitudinal set of mainstem terrace ages to evaluate whether incision incrementally progresses upstream or is contemporaneous. Second, we explore longitudinal variations in mainstem-adjacent mass movements to evaluate whether they reflect a time and space progression in response.

Whitaker-Fornek, Jessica; Lybbert, Casetin; Pilarski, Jason
Category: Three Minute Thesis
Role of central [H+] and CO2 in early rhythmic neural activity and breathing rhythms in the developing zebra finch brainstem
The nervous system is derived from a generic collection of neurons that must migrate, proliferate, and differentiate in order to form distinct neural circuits capable of producing complex behaviors. It is currently unclear what signals govern this transition from a generalized, undifferentiated state to a specialized, mature network. This is especially true in the context of rhythmic, spontaneously generated motor behaviors like breathing. In an adult, [H+] and CO2 are detected by the brainstem in order to maintain appropriate breathing rhythms. Thus, I hypothesize that [H+] and CO2 also play a role in prenatal and perinatal development. In other words, like more mature animals, [H+] and CO2 maintain and regulate the excitability of brainstem neurons as they transition from non-respiratory cells to specialized microcircuits that generate the phase of ventilation.

Williams, Paul
Category: Humanities, Behavioral & Social Sciences (B)
Bigger On the Inside: Codifying the Chronotope of the Labyrinth
Labyrinths appear frequently in fantasy literature. Some provide an episode in a much larger story, such as the tunnels where Frodo and Sam confront Shellob, while others provide the central setting of the story. This latter type of labyrinth functions as a polder, defined by John Clute and Roz Kaveney as “enclaves of toughened reality, demarcated by boundaries from the surrounding world.” These labyrinth-polders frequently provide the structure for a number of fantasy stories, to the point that we can discern a specific story type based around them. Mikhail Bakhtin provides a useful tool for defining new narrative subcategories with his theory of the chronotope, which invokes both time and space to influence and fashion both theme and form within a story. Chronotopes account for the way recognizable genre fragments (characters, timing, etc.) intermix in a specific time and space.
My thesis examines how Robert Holdstock, Patricia McKillip, and John Crowley exemplify what we might term “the labyrinth-as-polder story;” each creates a distinct fantastical labyrinth
sequestered from the larger world that combine trials of time, space, memory, and imagination to enact transformation upon the characters. Fantasy studies is a relatively young field and much work remains to explore the genre’s various narrative types. Mikhail Bakhtin provides a useful tool for defining new narrative subcategories with his theory of the chronotope, which invokes both time and space to influence and fashion both theme and form within a story. Chronotopes account for the way recognizable genre fragments (characters, timing, etc.) intermix in a specific time and space. My study catalogues narrative echoes across my texts to define the chronotope of fantasy labyrinths, which uses a limited space to portray a vastness of story equal to the sprawling landscapes of Tolkien.

Wood Roberts, Barbara; Anderson, Tessa; Xu, Xiaomeng
Category: Humanities, Behavioral & Social Sciences
Poster #24
To be Seen or Not to be Seen? Testing the Effects of Visual Instructor Presence in a Post-Secondary Psychology Course
Visual instructor presence is implicit in traditional in-seat classrooms, but may or may not be present in online courses. How important is visual instructor presence in online courses? Does it significantly affect student engagement and outcomes? We tested the effect of visual instructor presence in two Fall 2016 online sections of Introduction to Social Psychology (taught by two different instructors). Both courses utilized the same video-recorded lectures. However, one section’s videos (experimental condition) contained visual instructor presence while the other section’s videos (control condition) did not (visual presence of the instructor was covered with a full-screen background and lecture-appropriate notes). All lectures and quizzes were developed by one of the instructors and simultaneously delivered to both sections; weekly classroom announcements were composed by the other instructor and simultaneously delivered to both sections. Thus, both sections received the same content and assessments at the same time.

Woods, Tanna
Category: Education, Learning & Training
Poster #13
Health risk knowledge and its effect on obesity
Prevalence of overweight and obesity-related diseases like cardiovascular disease, diabetes, and joint problems continues to increase due to the continuing worldwide obesity epidemic. Obesity is affecting all ages and spans worldwide. Knowledge could be an important component for items such as weight loss results, a correct perception of obesity, and motivation for change. This
litgure review examined how health knowledge has been related to obesity in current research to determine what is known and what still needs to be understood.

Woods, Tanna; Nies, Mary
Category: Humanities, Behavioral & Social Sciences
Poster #12
Inequities in Obesity Perception Research
Obesity is a complex problem with physiological and psychosocial components that affect the course of the disease and how it is treated and understood. Young children have been identified as an ideal target for intervention and prevention. At this age, parents are moderators of child weight because they are role models and gatekeepers for behavior and choices. This is problematic when parents are known for their inability to correctly distinguish weight classification in their children. This review sought to understand parental perception research through a systematic review.
Thank you to all who contributed to the success of this event.

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