

Schedule of Events

March 31, 2022

Nebraskan Student Union Ponderosa Rooms



Thursday, March 31

7:30 - 9:00 am Students set up posters, Ponderosa A&B

10:00 am - 3:00 pm Open poster viewing, Ponderosa A&B

10:00 am - 11:00 am Natural & Physical Sciences Poster Presentations & Judging

11:00 – 12:00 pm Behavioral & Social Sciences Poster Presentation & Judging

12:00 – 1:00 pm Professional & Applied Studies Poster Presentation & Judging

1:00 – 2:00 pm Fine Arts & Humanities Poster Presentation & Judging

11:00 am to 2:00 pm Oral Presentations-Ponderosa C&D

2:00 PM Dance Performance – Sandhills Room

4:00 pm Awards Reception

Undergraduate Oral Presentation Schedule



Thursday, March 31, 2022

Room: Ponderosa C

- 11:00 am---**Ty Masco:** *Soil Properties, Forage Quality, and Ground Cover Differ Between Native and Restored Prairies* - (Mentor - Gregory Pec)
- 11:15 am ---**Ellie Morrison:** *Potential Hybridization Between Two Species of California Salvia* (Mentor – Bryan Drew)
- 11:30 am ---**Leigh-Anne Lehman:** *Examination of Sex-Specific Differences in Type 2 Innate Lymphoid Cells and Adaptive Immune Responses Following Peanut Exposure* (Mentor – Joseph Dolence)
- 11:45 am ---**Kaelinn Friesen:** *Prevalence of Bacterial Pathogens in Eastern Nebraska Tick Population* (Mentor – Julie Shaffer)
- 12:00 pm ---**Kiley Anderson:** *The Poetry and Public Persona of Phillis Wheatley* (Mentor – Maria O'Malley)
- 12:15 pm ---**Caralyn Bundi:** *The Fourth Horseman of the Apocalypse - Pestilence* (Mentor – Denys VanRenen)
- 12:30 pm ---**Caitlin Armbrust:** *Women in Modernist Literature Who Enable the Patriarchy & How it Applies to Women Today* (Mentor – Annarose Steinke)

- 12:45 pm --- **Gracie Luebbe:** *An Analysis of the Traits Which Form the Identities of Three Women within There There* (Mentor – Janet Graham)
- 1:00 pm ----- **Courtney Ostrander:** *Acceptability of GrandPad in Older Adults: Preliminary Results of a Case-Study* (Mentor – Ladan Ghazi Saidi)
- 1:15 pm ----- **Charlotte Griffith:** *Management of Depression and Anxiety in Patient Aphasia* (Mentor – Ladan Ghazi Saidi)
- 1:30 pm ----- **Tristan Larson:** *Shoulder Complex and Trunk Dynamic Motion Changes Across the Season will be Beneficial to Identify Their Training Load and Musculoskeletal Stresses* (Mentor – Kazuma Akehi)
- 1:45 pm ----- **Kevin Burd:** *Pros Turned Cons: Correlation Between Celebrity Status and Punishment for Crimes* (Mentor – Thomas Orr)

Room: Ponderosa D

- 11:00 am --- **Sarah Chandler** *Bacterial Disease Presence in Hall County, Nebraska Tick Populations* (Mentor – Julie Shaffer)
- 11:15 am --- **Samantha Mercer:** *Jumping Species: Spilling the Beans on the Next Epidemic* (Mentor – Julie Shaffer)
- 11:30 am --- **Emma Weis:** *Staphylococcus Aureus Persisters Exhibit Increased Survival to Components of the Innate Immune System* (Mentor – Austin Nuxoll)
- 11:45 am --- **Trenten Theis:** *Increased Persister Formation in Staphylococcus Aureus Leads to Increased Survival within a Host* (Mentor – Austin Nuxoll)

- 12:00 pm ---**Elijah Lynch:** *Shadows of Paradise: Dante's Muse and Portrait of a Lady on Fire* (Mentor – Rebecca Umland)
- 12:15 pm ---**Joshua Wetovick:** *Making Music in Alfred Lord Tennyson's Arthurian Epic, "Idylls of the King"* (Mentor – Rebecca Umland)
- 12:30 pm ---**Miranda Niemeyer:** *The Willingness to See: An Analysis of Grace and Edith Abbott's Efforts in Social Work* (Mentor – David Vail)
- 12:45 pm ---**Jonathan Drozda:** *The Significance of Character: Persons and Races of Middle-Earth* (Mentor – David Rozema)
- 1:00 pm -----**Nate Grimm:** *Exploring the Mental Health Needs of University Student-Athletes During COVID-19* (Mentor – Krista Fritson)
- 1:15 pm -----**Maria Bergner:** *A Systematic Review of the Programs and Existing Online Games for Children Aimed to Address the Issues of Racism and Racial Discrimination Across all Minority Groups* (Mentor – Ladan Hui Liew)
- 1:30 -----**Will Babbitt:** *The World War II Correspondence of Rodney "Buddy" Babbitt* (Mentor Jeff Wells)

Graduate Online Oral Presentation Abstracts



English

Christy Thompson

Mentor: Janet Graham

Title: A Cultural Materialist Suitcase Made of Bone

This essay will unpack the complex themes of immigration labor and identity that the author Faye Myenne Ng weaves throughout her novel *Bone* as she makes readers laugh, cry, and wait throughout a complex timeline integrated with political and historical elements. Ng's novel can be excavated using cultural materialistic tools to explore Leila's journey of grief and acceptance along with the discovery of a suitcase containing ties to her heritage since relevant history is past and present. The four key characteristics of a Cultural Materialistic literary lens are historical context, theoretical method, political commitment, and textual analysis as described by experts Dollimore and Sinfield. The essay focuses on the main character Leila and the lessons within her *Bildungsroman* journey throughout the complicated timeline as she learns to accept and appreciate her binary identity as a second-generation Asian American. My research on immigration issues and laws will provide insight and parallels to the author's life and showcase key historical elements within the novel that affected thousands of immigrants and their families. The opposition of the cultural and political standard regarding the treatment of women and immigrants in the lower-class conditions is also explored. In essence, the discourse Ng used with the unique reverse chronological timeline marked with key historical elements contribute to Leila's invaluable connection to her cultural and familial roots which are part of her binary identity and ultimate journey to freedom. Within Leila's journey, lessons can be found that may be valuable to one's personal journey in the quest for knowledge and a richer understanding of issues regarding immigration, humanity, and the heart.

History

Braydon Conell

Mentor: Linda Van Ingen

Title: *The Rise and Influence of the Homophile Movement: A Historiographical Essay*

A turning point for the acceptance of gay individuals in American society was the removal of homosexuality from the list of mental disorders of the American Psychological Association's Diagnostical and Statistical Manual (DSM) in 1973. But this acceptance was neither the end, nor the beginning, of gay activism. During both World War II and the Korean War, gay men were excluded from military service based on sexuality. This exclusion created a gay identity that evolved to having the goal of fighting for integration. This essay discusses what past scholars have discovered about this topic. From seclusion in rural areas to being attacked in urban political culture, gay men and women nevertheless created their own tools for inclusion and liberation. The thesis that will stem from this historiographical essay will discuss the resulting rise of the homophile movement following World War II and the Korean War, focusing on the voices of gay men and women in the Midwestern United States. The focus of this research is from the 1950s through the 1980s, a time traditionally seen as hostile to homosexuals. Yet during this period, a flourishing underground – but increasing visible – movement emerged that extended far beyond the coasts. Coming out of the Vietnam War, these gay activists were posed with new challenges, the biggest of which became the HIV/AIDS crisis of the 1980s. The homophile movement, though not typically the focus of queer politics, was uniquely positioned to help handle the AIDS crisis, something the national government was inept to do themselves.

Brandon Eldridge

Mentor: Torsten Homberger

Title: *Circumventing the Law: The Legal History of Nazi Germany*

The following research details the legal history from the Weimar Republic's time through the rise of Adolf Hitler as he became the Chancellor of Germany, eventual Führer, and led to the extermination of the Jewish people. The traditional approach to the historiography focuses on military, social, cultural, or other aspects of the history of Nazi Germany. The legal steps taken by Hitler and the Nazi party made all the deplorable actions possible. The research's focus details laws, proclamations, and decrees of the Nationalsozialistische Deutsche Arbeiterpartei (NSDAP), known as the National Socialist German Workers' or Nazi Party, and how they circumvented the law to create a fascist state. The legal history includes the creation of democracy and the

constitution of the Weimar Republic. The constitution's analysis includes how the Nazi party wanted to take down this democratic government style. The legal structure of Nazi Germany would not have been possible without Article forty-eight of the Weimar Republic's Constitution. This article allowed for the suspension of civil liberties and subverting the 1919 constitution under "emergency provisions." The research examines this article of the document and emphasizes its importance to allowing Nazi Germany to be conceivable. It shows a step-by-step approach that the Nazis took to enact this plan that would change Germany's trajectory from a representative democracy to a fascist state and dismantle the Weimar Republic's legal structure. The research shows that the Nazi party did not break legal precedence but circumvented the spirit of the law to create a dictatorial regime focused on eliminating undesirables from society. Finally, the legal history emphasizes the infamous Wannsee Conference and how Hitler enacted the plan for mass exterminations using the new legal structure.

Kinesiology and Sports Sciences

Amy Kofoed

Mentor: Elena Robinson

Co-Author: Scott Unruh

Title: *Management of Achilles Tendinopathy in Patient Presenting with Celiac Disease and Joint Hypermobility: A Case Study*

A 37-year-old female presented with a chronic onset of pain and decreased function in her left ankle for about a year and a half. Initial evaluation revealed left ankle swelling, localized bruising, stiffness, difficulty weight-bearing, and radiating pain in the lower leg. The patient has a history of recurrent subluxations/dislocations within the shoulder, ankle, and knee regions along with previous diagnoses of Celiac disease and joint hypermobility syndrome. Surgical intervention included Achilles tendon debridement and repair, retrocalcaneal bursectomy, and a Haglund's deformity excision. Upon completion of surgery, the patient was treated by athletic training clinicians and students at an injury clinic. Post-surgical treatment focused on management of surgical incisions, increasing range of motion and strength, advancing proprioception for the ankle, and a return-to-activity progression. Within about 14 weeks, the patient showed adequate function and was able to resume daily activities while continuing a home exercise plan. This case portrays evaluation and management of a common chronic condition affected by unique patient history.

Olivia Slater

Mentor: Megan Adkins

Co-Authors: Mila Serefko, Jada Ruff

Title: *Building a Better Online Classroom: An Analysis of Student Feedback Regarding Common Distance Learning Tools and Instructional Strategies*

Online learning has shown significant growth over the last decade and has become a prominent delivery system of course work for students attending Universities. Given the continual increase and importance of online education it is imperative for researchers to understand current and future means to enhance the online learning experience and explore effective teaching strategies best suited for the diverse student population enrolled in online courses. To initiate a better understanding related to online learning, and student perceptions 376 undergraduate and graduate students, identified as completing at least one online course, at a small Midwestern university participated in the study. Participants were prompted to answer 11 close and open-ended survey questions based on their online course experience. Results indicate participants value meeting their instructor virtually or in-person and felt multimodal approaches of teaching improved understanding and interest related to the course. Areas of improvement included the desire for the teacher to incorporate more “real world” activities and assignments, as well as less discussion board and more video interactions with the class. The results of the study have implications for online instructors, instructional designers, and administrators who hope to enhance student engagement in online courses and continue to evolve learning opportunities within the University setting.

Carol Wieck

Mentors: Shannon Mulhearn

Title: *Bringing Quality Physical Education to the Homeschool Community: A Proposed Study*

The homeschool community is a growing community. There are currently 3.7 million K-12 students who are homeschooled in the United States, and the National Home Education Research Institute reported that the percentage of households with homeschooled children has increased from 5.4% to 11.1% from March 2020 to March 2021. These students need access to quality physical education just like other students in the United States, which includes a standards-based curriculum. In the past 10 years, although 1,372 publications mention “Homeschool”, “Physical Education”, and “Curriculum”, only 9 articles were found that also noted “National Standards”.

Additionally, none of the articles is directly related to a physical education curriculum designed for Homeschool families. Therefore, the purpose of the proposed multi-phase community-based participatory research study is to determine the needs of homeschool parents for a standards-based, quality physical education curriculum. This proposal focuses solely on Phase I. Methods: Phase I of this study will use both quantitative and qualitative methodology. Phase 1 will be guided by the following questions: (1) What is currently available to homeschool parents for physical education? (2) What are the criteria for homeschool physical education from the state of Nebraska? (3) What are parent perceptions about the need for physical education curriculum? Implications: Findings from Phase I will be used to inform future phases including curricula designed to address homeschool community needs while also ensuring a connection to national standards.

Sophie Mellema

Mentors: Kazuma Akehi

Title: *Effects of High Intensity Laser Therapy on Passive Knee Joint Range of Motion and Musculotendinous Mechanical Properties*

Context: High intensity laser therapy (HILT) has been used for the treatment of various musculoskeletal conditions, aiming to control pain and facilitate to regeneration of the tissue. However, it is inconclusive how much passive tissue mechanical resistive properties and joint range of motion (ROM) will change after the HILT on thigh muscles. Objective: The purpose of this study is to examine if a 4-week of HILT session influences passive musculotendinous stiffness (MTS) and ROM for the hip extensor muscles comparing to the control. Study Design: Factorial study will be used. Participants: Twelve active female athletes at the University of Nebraska at Kearney and twelve recreationally active college-aged females will be recruited. Each participant should have a chronic hamstring tightness yet have no known musculoskeletal injuries in the dominant side of the leg in the last 6 months prior to the data collection. Procedure: Passive hip flexion ROM and MTS will be measured at two different times (pre- and post-HILT session). ROM and MTS will be measured using a load cell and wireless digital goniometer during manual passive hip flexion motion at 5°/second. Following the initial assessment, participants will be randomly assigned to the HILT or control group. The HILT group will experience a treatment twice a week for 4 weeks. Following the 4-week treatment session, participants will be back for the follow-up assessment. We hypothesized that DTLT would allow a greater increase of ROM and less MTS compared to the control group. Clinical Application: The results of this study would provide better clinical insights of the modern and advanced laser therapy to improve musculotendinous characteristics and joint mobility.

Teacher Education

Paul Dye

Mentors: Martonia Gaskill

Title: *Virtual Reality, 3D and 2D Learning: A Study in Visual, Interactive Tools in the Field of Medicine.*

The pursuit of improved patient outcomes through the evolution in medical education is ongoing. Traditional, didactic learning methods are still utilized as a primary modality throughout medical learning (Newman & Lattouf, 2020). To address deficits in understanding and retention of learning material, experiential learning methods are increasingly employed with some success (Satterlee, 2008, p. 332). Within the realm of experiential learning are visual technologies, such as touch-interactive, 3D and Virtual Reality that offer new ways of teaching typically challenging concepts. The following presentation will cover the impact of visualization-based learning methods in medical education in relation to educational value, collaboration, conceptual skills and engagement. This impact will be quantified by data gathered from exercises in medical education, utilizing a variety of visualization modalities.