Eastern Washington University
10th Annual Student Research & Creative Works Symposium
Wednesday, May 16, 2007
8 a.m. – 5:30 p.m.
Senior Hall

Agenda

8 a.m. – 9 a.m. Welcome & Coffee
1st Floor

8 a.m. – 4 p.m. Graduate Studies, EWU Library, Multicultural Library
Visit the information tables located on the first floor

8 a.m. – 4 p.m. Art Display
2nd Floor Student Lounge

8 a.m. – 11:40 a.m. Morning Oral Presentations
Rooms 101, 124, 201, 203, 204, 221, 243

Noon – 1 p.m. Keynote Address
PUB MPR – Lunch Provided
Dr. Dick Winchell,
Department of Urban Planning, Public and Health Administration
“Incomplete Knowledge: Research in Search of Community, Culture and Change”

1:20 p.m. – 3:40 p.m. Afternoon Oral Presentations
Rooms 101, 124, 201, 203, 204, 221, 243

2 p.m. – 4 p.m. Poster Session
Rooms 302, 304, 306; Posters may be viewed throughout the day

4 p.m. – 5:30 p.m. Closing Reception
Refreshments Served
Tawanka 215 A,B,C

Please join us to recognize and celebrate the presenters and their faculty mentors as we present awards in recognition for outstanding presentations.
**Symposium Sponsors**

EWU Office of the Provost  ❖  Graduate & Undergraduate Studies
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McNair Scholars Program  ❖  EWU Foundation Grant
STCU

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And to all students, judges, mentors, volunteers & departments who worked to make the symposium a success.

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Jose Cantu, Student Assistant, Research Symposium
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Cynthia Dukich, McNair Scholars Program, Counselor/Academic Coordinator
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Ryan Mizner, Assistant Professor, Physical Therapy
Yves Nievergelt, Professor, Mathematics

If you would like to contribute, envelopes are available in the Symposium office, Showalter 217. Please make checks payable to:

EWU Foundation, for Student Research & Creative Works Symposium
Judges

Peggy O’Connell    Robin Stenge    Sally Winkle    Julie Miller
Nancy Birch        Larry Kiser     Russell Kolts    Marty Johnston
Robert Schwartz    Julia Smith     Brian Donahue    Patty Chantrill
William Loendorf   Larry Luton     Tracy Springberry Terry MacMullan
Karen Carlberg     Tom Hancock     Vickie Shields   Pat Kelley
Anthony Oertling   Byron Russell   Scott Finnie    AnaMaria Martinez
Wendy Homes        Ron Dalla       Stacy Warren    Esteban Rodriguez-Marek
Tony Flinn         Kristin Edquist Amani El-Alayli Kathleen Hutenmaier
Theresea Martin    Neville Hosking Dana Elder      Kayleen Islam-Zwart
Martin Seedorf     Susan McGinty  Duanning Zhou    Mary Ann Keogh Hoss

Information Tables

EWU Library

EWU Libraries will have an information table available in the lobby of Senior Hall at the 2007 Creative Works Symposium. The table will hold information on library services such as RefWorks. The table will also provide information on upcoming library events such as Books2Eat, the Bookmark Contest, and Game Night! The table’s main focus will be on the new Library Student Liaison position. The Library Student Liaison will be present throughout the day to answer questions and meet staff and students. Please stop by our table or head over to the library for a visit!

Multicultural Library

Have you been looking for a source to compliment or challenge your perspective, to support a paper or find a source that may not be available through EWU’s main Library system? If so, or if you are just curious to see something out of the ordinary, stop by and view the literary sources available at the Multicultural Library display! EWU students from diverse backgrounds will be on-hand to discuss soon-to-be available literary sources as well as share his/her personal experience of building trust, teamwork and awareness during the creation of the Multicultural Library. The Multicultural Library will be housed in Monroe Hall’s Academic Support Center and will open Fall 2007. Stop by the display to get “first-dibs” on what you want to check out!

Graduate Studies

The EWU Graduate Studies Office will have an information table available during the Symposium. Students considering advanced study beyond the bachelor’s degree will find information about more than 50 graduate programs offered at EWU, the application process, tuition and financial aid, contacts and deadlines, along with applications for admission. The friendly, professional staff members in the Graduate Studies Office are available to answer questions on the day of the Symposium and every weekday from 8 a.m. to 5 p.m. in 206 Showalter Hall, or by phone at 359-6297.
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Poster Session Presentations: Room 302, 304 & 306 ........................................... 18-21

Presenter Abstracts in Alphabetical Order ............................................................... 21-78
Incomplete knowledge is the starting point for those interested in learning how communities work, for understanding human interaction. I started my research on communities with directed field studies in urban Chicago, working with street gangs and continued in urban neighborhoods in Denver and Phoenix and on American Indian reservations. All research requires both a philosophy that frames how the researcher will approach knowledge and also methodologies to guide or structure that effort. Community-based research recognizes the community members as “experts” in how their community works and that the researcher must depend upon direct interaction, participant observation and, as appropriate, ethnographic interviews to gain more complete knowledge. Such methodologies are best understood from interdisciplinary perspectives and are based on exploration of community in the field. Incomplete knowledge is addressed in part by partnerships, shared exchanges and discussions about community and change through daily life and lived experiences. In this presentation I draw upon my experience with field applications of community-based research to explain how this approach can yield insight and understanding in the effort to describe community.

Biography
Dr. Winchell, professor of Urban Planning at EWU and a Fellow of the American Institute of Certified Planners, has combined academic research with community building and planning to understand how communities work and how to promote positive, community-based change. He has a Ph.D. in Geography from Arizona State University, a Master of Urban and Regional Planning from the University of Colorado-Denver Center and a B.A. with a dual major in sociology and philosophy from Wartburg College. He has been on the planning faculty at EWU since 1987. Dr. Winchell is active in American Indian tribal planning and serves as principal investigator for the Northwest and Alaska Tribal Technical Assistance Program, a DOT-funded program at EWU since 1993. Dr. Winchell has worked with tribal leaders and staff throughout the Northwest to address critical tribal needs in transportation, housing and economic development. He served as planning director for the Fort McDowell Yavapai Tribe from 1975 to 1980 and completed his Ph.D. dissertation, Space and Place of the Yavapai, on the social geography of Yavapai youth. He was director of the Native American Public Administration Program, offering an MPA in Window Rock Arizona, for the Navajo Nation through Arizona State University. Dr. Winchell has published widely on American Indian tribal planning, neighborhood planning and community development. He studied urban planning in Berlin as a Fulbright Scholar and has taught as an adjunct faculty member at the University of Innsbruck, Alaska Pacific University, Northern Arizona University and Arizona State University. He has worked for the City of Scottsdale, Arizona; the City of Huntington Beach, California; the City of Vail and Vail Associates, Colorado; and for Shoneberger, Straub and Florence, Architects, in Phoenix. Recent projects include the Community Service Learning initiatives Pathways to Progress in Cheney and the East Central Neighborhood Partnership Center in Spokane.
Art Exhibit
Second Floor Lounge

1- Jennifer Becker, Undergraduate – Mentor: Shelley Murney
   Photography: Late Night Carnival
2- Stacy Bertsch, Undergraduate – Mentor: Melissa Furness
   Acrylic on stretched canvas: Teton Wandering
3- Megan Broughton, Undergraduate – Mentor: Shelley Murney
   Painting: Lazy Daze
4- Monica DeWitt, Undergraduate – Mentor: Shelley Murney
   Photography: Untitled
5- Sara Dunbar, Undergraduate – Mentor: Shelley Murney
   Photography: Weathered
6- Ashley Falconer, Undergraduate – Mentor: Shelley Murney
   Black & White Photography: Maximum Speed
7- Heron Furtwangler, Undergraduate – Mentor: Shelley Murney
   Photography: Coil
8- Julie Kathrens, Undergraduate – Mentor: Shelley Murney
   Photography on Steel: Coil
9- Devon Kelley, Undergraduate – Mentor: Shelley Murney
   Photography: Untitled
10- Hyun-Kyung Lee, Undergraduate – Mentor: Lanny DeVuono
    Painting: Identity Flag
11- Lisa McCarthy, Graduate – Mentor: Nancy Hathaway
    Charcoal: Isolation
12- Austin Miller, Undergraduate – Mentor: Shelley Murney
    Photography: Untitled
13- Nicole Moya, Undergraduate – Mentor: Shelley Murney
    Photography: Untitled
14- Todd Rattray, Undergraduate – Mentors: Shelley Murney, Lanny DeVuono
    Charcoal: Untitled
15- Jessica Robinson, Undergraduate – Mentors: Shelley Murney, Lanny DeVuono
    Photography/Acrylic: 4 Matts
16- Jaque Ryder, Undergraduate – Mentor: Tom Askman
    Ceramic Sculpture/installation: Lyrical dissent
17- AnnaMarie Schaefer, Undergraduate – Mentor: Shelley Murney
    Watercolor: Untitled
18- Dennis Sullivan, Undergraduate – Mentor: Shelley Murney
    Photography: Untitled
19- Amanda Swan, Undergraduate – Mentor: Tom Askman
    Oil Painting: Accessories
20- Yelena Syvaya, Undergraduate – Mentor: Shelley Murney
    Photography/water colors: Untitled
21- Boet Waldbjorn, Undergraduate – Mentor: Shelley Murney
    Photography in metal: Untitled

Art Coordinator: Kristine Kaeding, Assistant to the Director, EWU Gallery of Art,
Student Director, ASEWU Student Gallery
2007 Diversity Theme

James Baldwin

“The questions which one asks oneself begin, at last, to illuminate the world, and become one’s key to the experience of others.”

The EWU Symposium was awarded a Diversity Grant through the Diversity Initiative from Eastern’s Board of Trustees. These grants promote and support diversity in EWU programs. The symposium committee has chosen the quotation above by the African-American author James Baldwin as the 2007 symposium theme. These words encapsulate a key mission of the symposium: to be a catalyst for sharing the diverse forms of knowledge across the varied disciplines at the University by providing a single campus forum for encountering these many perspectives.

James Arthur Baldwin (August 2, 1924 – November 30, 1987) was a novelist, short story writer, playwright, poet and essayist, best known for his autobiographical first novel Go Tell It on the Mountain, first published in 1953. Most of Baldwin’s work deals with racial and sexual issues in the mid-20th century United States. His novels are notable for their personal approach to complex social issues, and his essays and public appearances made him a prominent voice in the Civil Rights movement of the 1960s.

During the early 1980’s, Baldwin was on the faculty of the Five Colleges in Western Massachusetts. While there, he mentored future playwright Suzan-Lori Parks, then an undergraduate at Mount Holyoke College, who won the Pulitzer Prize for Drama in 2002. Baldwin died of stomach cancer in 1987 at the age of 63.
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Heathcare: A right or a Privilege-The Need for Care
Lisa Agte, Graduate
Dr. Mary Ann Keogh Hoss, Business Administration

There is currently a national crisis in the United States that has already claimed countless lives and is threatening the health of 43.6 million Americans. It's such a silent killer that most people are probably unaware of the threat it poses. What is this crisis, why do American's not see more about this crisis on the news? It's the lack of universal health care. The United States is currently the only developed nation that has signed human rights declarations, but not provided the "right to health" for its citizens. The "right to health" is broader than health care; this paper will focus specifically on the right to health care as a component to the right to health. Information was collected from various domestic and international journals. Health care in the United States was compared to Europe and Canada where the government does provide universal coverage. The result was that although other nations have set an example for the US, the US has yet to respond to the "right to health." It is appalling that despite the recognition of the need for health care that the US government has not yet found a way to economically provide coverage.

The Women’s Bureau: It’s Involvement in Immigration and the Feminist Movement During The 1920'S
Adam Attwood, Undergraduate
Dr. Ann Le Bar, History

What would be the next phase of the American women's movement following the momentous victory of the Nineteenth Amendment granting women the right to vote in every state? My research focuses on a development that I term "bureaucratic feminism." Bureaucratic feminism dawned in the 1920's with the activities of the newly-created Women's Bureau, an agency within the United States Department of Labor that was made permanent just prior to the ratification of the Nineteenth Amendment. The Women's Bureau nationally championed wage-earning women, including female immigrants, with sympathetic objectivity, as embodied in precedent-setting statistical reports analyzing the socio-economics of women. The work of the Women's Bureau varied from the prevailing "Americanization" campaign of such organizations as the Daughters of the American Revolution. Bureau researchers interviewed immigrant women to get their perspectives in their own words. And the Women's Bureau's reports told the story of female immigrants integrating into the American work force.
Hope & Healing Ministry Family Needs Assessment
Starla Beaman, Graduate
John Coyle - Kelly FitzSimmons (co-authors)
Dr. Lisa Avery, Social Work

In order to help identify the types of unmet needs which may exist within church and community families, this research project proposes the use of an anonymous family needs assessment using a combination of qualitative and quantitative data to help identify any unmet needs. The needs assessment identifies and prioritizes the types of classes, programs, support groups and community resources most beneficial to families. The study population includes 79 church members and 9 community residents 18 years of age and older. Surveys were distributed either in-person or by mail, with a prize-drawing used as incentive to help increase the response rate. Results depict a poor response rate from the community however, overall findings suggest a similarity between church members and the community. The assessment identifies the top four needs as: growing in relationship with God, developing healthy living and eating habits, having service and volunteer opportunities, and establishing friendships. The top marriage or dating need revealed is developing and maintaining romance, and the top parenting need mentioned is establishing and teaching values in the home. The top needs of both men and women are identified and similarities and differences between them are shown. Suggestions for future research are also discussed.

Diet and growth of northern pike (Esox lucius) in Box Canyon Reservoir, Pend Oreille River, Washington
Nicholas Bean, Undergraduate
Dr. Allan T. Scholz, Biology

The objectives of this study were to determine the food habits and growth of northern pike, discovered in Box Canyon Reservoir in 2004. Their diet consisted entirely of fish. Northern pike preyed opportunistically on pumpkinseed (27 % of the relative abundance of all fish in the reservoir and 27 % of the pike diets). Pike selected peamouth (7 % reservoir, 24 % pike diet) and mountain whitefish (< 1 % reservoir, 7 % pike diet). Pike avoided tench (7 % reservoir, < 1 % pike diet), and consumed fewer yellow perch than available in the reservoir (26 % reservoir, 11 % pike). Lengths at age were: age 1 (194 mm), 2 (312 mm), 3 (401 mm), 4 (530 mm), 5 (656 mm), 6 (764 mm), 7 (883 mm) and 8 (1,012 mm), which were longer than North American populations. Northern pike are apex predators that exert top-down structuring of fish communities and cause cascading trophic interactions in a food web. Their presence in the reservoir has potential to undermine efforts to protect a federally listed endangered species (bull trout) and other native fishes (e.g. peamouth and mountain whitefish).

Late Night Carnival
Jennifer Becker, Undergraduate
Shelly Murney, art

No Abstract Submitted
The Desired Ramification of Bilingual Education in Washington
Jordana Belch, Undergraduate

Dr. Guillermina Walas, Spanish

The Hispanic population in Washington continues to grow daily in Washington, which has created a need to aid these Hispanic students' instruction in the school system. In Wenatchee 30% of the school aged children are Hispanic and English as a Second Language services in order to succeed. Most elementary schools use different models of bilingual instruction to aid students. Lewis & Clark Elementary has implemented a dual language bilingual program that allows Hispanic and Anglo-American children to learn both English and Spanish in the elementary classroom. Other schools in the area have chosen different methods for the models that they implement. Although schools elect different models, the implications for the students greatly varies depending on the method used.

Parents and Children Together: Evaluation of Program Effectiveness on Child Wellbeing
Lori Bennett and Kimberly Hathaway, Graduates

Dr. Lisa Avery, Social Work

The purpose of this project was to evaluate the effectiveness of the PACT program in enhancing child-well being. The sample consisted of 15 PACT participants with the majority of parents being under the age of 20. Data were collected on attachment security using the N-CAST assessment. A baseline score was collected upon entry into the program and then a follow-up was done after three months of service provision. On two of the eight scales used, we detected significant improvement over the three month period the infant teaching scale and the infant/caregiver combined score on the feeding scale. A limitation of the study was that we had a sample size of only fifteen participants; also, there was no comparison group. More research needs to be done, with a larger number of participants and a comparison group to accurately measure the effectiveness of the program.

Increased Risk of Dental Decay in Endurance Athletes
Amanda Bergquist, Undergraduate

Lisa Bilich, Dental Hygiene

The process of dental decay is complex, but revolves around a handful of key components. Among others, the presence of dietary carbohydrates, an environment conducive to bacterial growth, and time, are factors of main concern here. The endurance athlete not only consumes large amounts of carbohydrates, but will generally go several hours before properly removing deposits from the teeth while generating an oral environment that breeds decay causing bacteria. The implications of decay can be detrimental to the training schedule of the endurance athlete, which may make it an issue of great concern. I have compiled research on the subjects of decay and dietary needs of the endurance athlete to illustrate this subject. This presentation will recognize and explain the link between decay and the endurance athlete as well as methods of prevention.
**Teton Wandering**
Stacy Bertsch, Undergraduate
*Melissa Furness, Art*

Teton Wandering is an abstracted landscape painted with non-traditional colors. The meaning and inspiration behind Teton Travel is taken from my experiences backpacking in the Tetons and from my passion for the outdoors.

**Analysis of Fatty Acids and Trans-fats in Food**
Sheena Biallas, Undergraduate
*Dr. Jeffrey Corkill, Biochemistry*

In this project the types of fatty acids present in different varieties of both organic and non organic milks was studied using SPE and GC-MS. For comparison values, hazelnut milk and goat milk were also analyzed. The main interest was finding proof that one type of production method, organic or non-organic, produced healthier milk. In the world of processed foods, trans-fats are a common occurrence due to partial hydrogenation of oils. Trans-fats are related to many health risks and are being limited or entirely excluded from some foods. French fry samples were analyzed using GC-MS to determine the relative percent of trans-fats present.

**National Identity in Post-Revolutionary Mexico**
Jamie Billings and Kristine Kaeding, Undergraduates
*Dr. Guillermina Walas, Spanish*

After the Mexican Revolution, there was a void left behind following the 34 year Porfiriato. Although democracy was the goal, one of the negative effects of it was ambivalence of national identity due to the desire to represent all citizens. When President Obregon came to power, he enacted a series of educational programs and reforms to elevate literacy levels of the general population, which inadvertently began to discuss the development of Mexican identity. He appointed Jose' Vasconcelos as Minister of Education. He headed the national mural project with its most prominent figure, Diego Rivera. Both had strong ideas about the face of national identity, but these were fundamentally in discord. While Vasconcelos claimed to exalt the indigenous elements of Mexican culture, in reality, his writings show a strong emphasis for the Eurocentric appearance. Diego Rivera was influenced by Vasconcelos and this is shown through his various projects. However, in his National Palace frescos, the indigenous element has no modern role. Did these men truly value the indigenous culture in Mexico or were they merely considered a part of the past?

**Child Abuse and Its Effects on Marital Experiences**
Emily Bowne and Elena Mortera, Undergraduates
*Dr. Kayleen Islam-Zwart, Psychology*

Child abuse can have long-term effects on many aspects of individuals' lives, especially their marital relationships. Negative marital experiences can be particularly harmful to these relationships. We hypothesized that individuals who were abused as children would report more negative marital experiences from their partners than those not abused. Additionally we predicted that women would report more negative marital experiences from their partners than men. We utilized archival data collected as part of the National Comorbidity Survey (Kessler, 2000). Results showed that there was a significant relationship for gender and child abuse for reporting negative marital experiences. However, there was not an interaction between gender and child abuse. The results implicate that the marital relationships of individuals who were abused as children could benefit from couples therapy.
Lazy Daze  
Megan Broughton, Undergraduate  
Shelly Murney, Art

Life is increasingly becoming overloaded with imagery. Internet and television play the largest role in communication to the general population. This overload of information has influenced me to paint in a style that is often called expressionistic and minimalist. My paintings are my own interpretations of the world that surrounds me. Some might say that my work is a translation of observed environment into larger patterns of indescribable energy. I see my paintings as visual representations of my inner passion for life and reflections of my soul.

Methodologies to Evaluate Social, Emotional and Behavioral Learning Programs for Youth  
Angela Brown, Undergraduate  
Dr. Mahlon Dalley, Psychology

We conducted a literature review to investigate methodologies used to evaluate social, emotional and behavioral learning (SEBL) programs for youth. We compared six aspects of selected programs: participant characteristics, program goals, techniques used, research designs, evaluation techniques, and results. Participant characteristics included number of participants, ages, gender, etc. Program goals involved teaching SEBL skills to participants. Techniques used to teach the skills included role plays, and contingent reinforcements. Research designs included single-subject and pre-test post-test designs. Evaluation methodologies varied from interviews, to published and unpublished questionnaires. PSYCINFO was searched for articles reviewing youth programs targeting SEBL with the major qualifier being the program went through an evaluation process. Key words used for the search included social skills programs, emotional intelligence, and various known programs such as Skill Streaming. A table outlining the six aspects of SEBL programs cross-referenced with the programs evaluated was constructed to analyze the information gathered. It was found that there were few similarities among the programs. We concluded that the validity was cause for concern with all of the programs evaluated. We further concluded that whenever possible, the best design to increase validity would be a randomly assigned pre-test post-test using a waitlist control group.

Clinicians' Perceived Indicators of Engagement During Sensory-based Activities in Children with Autism  
Megan Brown, Graduate  
April Carlson, April Goodman, Kathryn McCoy, Lisa Schroer, Jessica Steffan  
Robert Russell, Occupational Therapy

The purpose of this study was to identify the key indicators seen during sensory-based therapies with children on the autism spectrum. The Delphi technique was used by mailing 300 narrative surveys to a representative sample of occupational therapists across the nation. The survey asked them to list indicators of engagement they had observed during sensory-based therapy. Eighty-one respondents provided indicators which were coded and sorted into similar terms and definitions. In the next phases, 15 occupational therapists, experienced in sensory-based theories, were selected to refine and draw conclusions on the key indicators. The results revealed 7 top indicators of engagement: eye contact; behavior modulation; and increased affect, participation, vocalization, interaction, and attention span. There was no consensus with regards to which indicators are seen most often. Likewise, all 7 indicators were perceived as important. Additionally, there was no identified hierarchy to the indicators. Identifying indicators will help unify the language used to recognize engagement during therapy and lay the foundation for further exploration of valid and reliable outcome measures for future research.
Knowledge of Physical Activity and Its Benefits in Patients with Cardiovascular Disease
Kyla Brown, Undergraduate
Dr. Tanya LaPier and Dr. Kimberly Cleary, Physical Therapy

To most appropriately prescribe exercise, health care professionals need to consider the level of knowledge the patient has about exercise. The purpose of this study was to describe what patients with cardiovascular disease (CVD) know about exercise and its benefits. This study included 50 patients admitted to the hospital for a CVD related diagnosis. This prospective descriptive study used a sample of convenience recruited from a regional medical center. Patients completed a heart health quiz including items about physical activities and how they are beneficial for a healthy heart. We found it is commonly known (84%) that 20-30 minutes of exercise is needed, but few participants (4%) knew that exercise 6-7 days a week is necessary to gain health benefits. Patient education about the type, duration, frequency, intensity, and benefits of exercise is important to achieve optimal health benefits from physical activity.

Experiences of Students in a Peer Mentoring Program in Higher Education
Kathleen Calaway, Graduate
Brionn Tripp, Khoa Pham, Jami Hoff, Kathryn Machtolf
Dr. Wendy Holmes, Occupational Therapy

A review of the literature reveals students with disabilities in higher education face numerous challenges including decreased feelings of self worth and success in academic endeavors. Peer mentoring programs have been shown to be effective for students in higher education. The purpose of this qualitative study was to evaluate the experiences of participants in a peer mentoring program between Master's of Occupational Therapy (MOT) students and students with disabilities at Eastern Washington University. The research methods included interviews with five MOT students who participated in a peer mentoring program during Fall Quarter 2006. Analysis of interviews with MOT student participants revealed four themes: a) personal and professional development, b) feelings regarding the experience, c) opinions and feelings regarding the organization of the program and MOT student expectations, and d) an expanded view of individuals with disabilities. Results indicate the MOT students believed the peer mentoring program was valuable with recommended modifications. This study contributes to the curricular development for health professions education and to the understanding of peer mentoring programs within higher education.

More Than Once: Examining the Ethical and Attitudes of Repetitive Cheaters
Jose Cantu, Undergraduate
Dr. Susan Stearns, Communication Studies

This qualitative research examines repetitive cheaters using three criteria: (1) Respondents have to be actively enrolled in an accredited four-year institution, (2) must be 18 years or older, (3) have cheated 5 or more times. With the guidance of my mentor, Dr. Susan Stearns, we viewed the attitudes and perspectives of repetitive cheaters and their perceptions of their actions toward academic dishonesty based on a fifteen open-ended questionnaire qualitative survey they responded to. We will be discussing how repetitive cheaters answered regarding three categories: basic information, authoritative relationships, and peer relationships. These categories are being emphasized because repetitive cheaters responded more when it involved their relationships with others.
**Presenting a Queer ESL Curriculum: Warhol, Identity, and Cultural Negotiation**

*Kenneth Capps, Graduate  
Dr. LaVona Reeves, TESL*

Presenting a curriculum on the life and times of Andy Warhol, the author discusses the place of queer identities within an English language learning classroom. By focusing on the life and times of Andy Warhol, students are given the opportunity to respond to many non-normative subjects. The curriculum presented also allows for students to write on a daily basis—responding to the text, to the teacher's writing, and to the lives of other students. This helps students negotiate their identities in the target culture while also respecting their identity markers from their home culture. To provide a comprehensive understanding of the approach taken in developing this curriculum, the presenter provides the applicable theory from both English as a Second Language Research and Queer Theory.

**Component Based Software Development - The Key to "On Time and Under Budget."**

*Jason Carver, Undergraduate  
Dr. Duanning Zhou, Management Information Systems/Business*

There are many reasons why "on time and under budget" does not apply to most software development projects, but the most notable reasons spawn from the decisions made during the software architecture process. This is because most computer programmers understand the concept of code reuse, yet far too often do not know how to engineer the software in a way to maximize on the associated efficiencies. For these reasons the component based software development (CBSD) architectural pattern is gaining momentum in the industry and acceptance among the open source community. One such project, DotNetNuke, offers a free web portal framework which utilizes the CBSD concepts to allow for quick and easy expansion upon the framework. Using this framework the EWU MIS department was able to develop a new department collaboration portal in the matter of weeks instead of months, by one developer instead of a team of developers, and packed with features like event calendars, FAQs, surveys, blogs, etc.

**Rehabilitation of a Patient Following Right ACL Reconstruction: A Case Report**

*Stephanie Cearns, Graduate  
Dr. Ryan Mizner, Physical Therapy*

The anterior cruciate ligament (ACL) is the most commonly injured ligament in the knee. The purpose of this case report is to discuss the treatment of a patient following ACL reconstruction after six previous knee surgeries. This case report documents the treatment of a 30 year old female over five weeks of outpatient therapy. The patient's history of previous injuries and surgeries may have played a key role in her recovery process due to her apprehension and fear of further injuries. The patient presented with integumentary, musculoskeletal, and neuromuscular impairments. Her goal was to walk without pain. In addition, she took care of her two young children so strengthening and range of motion (ROM) goals were also addressed. The patient was seen twice a week for interventions that addressed pain, strength, ROM, and balance and she was also given a home exercise program. Her progress was slow and not all goals were met upon the completion of five weeks. A review of literature will lead to a discussion of treatment efficacy and suggestions for treating similar patients in the future.
**Population Forecasting of Walla Walla County**  
Siu Hung Cheung, Undergraduate  
*Charles Doston, Urban and Regional Planning*

This report predicts Walla Walla County's future population (2030) by using three population-forecasting techniques: linear, ratio, and cohort survival. These techniques were based on historic census data, population growth rates, future trends, projections conducted by Washington State Office of Financial Management, births, deaths, and age groups, to carry out the population projection. The report also examines the magnitude of migration and the changes in population composition over time.

**Designing and Proto-typing a Solution for a Manufacturing Process with a SCARA Robot**  
Ethan Churchill, Undergraduate  
*Jeff Donnerberg, Engineering and Design*

For a class assignment in robotics, our group decided to design and manufacture a proto-type automated assembly system for Omega Pacific that would dramatically increase efficiency of the gate assembly process. Because the company already owns and operates Adept SCARA robots, this was the type of robot we incorporated into the work cell. Using the ingenuity and creativity of a team of EWU technology students we were able to develop a computer integrated manufacturing system (CIM system). Using the characteristics and capabilities of the robot to select and feed parts to the automated assembly unit, manufactured by the students. The CIM system will replace the need for manual assembly of one type of locking carabineer gate manufactured by Omega Pacific Inc. This CIM system incorporates techniques such as using a teach pendant, repeatability, accuracy, dynamics and physics. These skills help to teach robotic theory, functions, and robot programmability for a practical use in industry.

**Diversity and Abundance of Multiple Taxa in Ecuadorian Cloud Forest: Trees, Epiphytic Ferns, Invertebrates, and Birds**  
Mike Clawson, Undergraduate, Co Authors: Matthew Berg, Sasha Greenspan, Markael Luterra, Michael Panza, and Alex Rigney  
*Dr. Peggy O'Connell, Biology*

The tropical montane cloud forest of the Ecuadorian Andes is one of the earth's most diverse ecoregions and is being deforested at an alarming rate. While lowland forests in Ecuador have been extensively studied, montane cloud forests, which have many more endemic species, have been virtually ignored by researchers. This study compared two elevational zones within upper montane cloud forest, in terms of species richness and abundance, using a multi-taxa approach. The taxa used were trees and understory vegetation, epiphytic ferns, invertebrates located within canopy bromeliads, and birds. All of the studies were done along the same four transects, two transects per elevational zone. The results of the vegetation study showed no difference in forest structure between the two elevations, but a strong difference in species composition. Ferns were found not only to be different in species richness between the transects, but also stratified into different height zones within the trees. Within the invertebrate taxa, the most abundant species were found on all four transects, but the majority of species was limited to a single transect. Bird species were not found to be different between the transects, although many new species were recorded in the area. Throughout all taxa in this study, the sample sizes were insufficient to yield representative samples of the populations. Our results, however, may serve as a basis for future research in the practically unstudied montane cloud forest.
From Tradgedy to Triumph, a Role Reversal of Hamlet and Othello

Thomas Coghlan, Undergraduate
Dana Elder, English

Both Hamlet and Othello represent two very distinct characters in Shakespeare's tragedies. By switching the roles—having Hamlet, and his character traits, and Othello, with his character traits—switch stories, the reader can further understand the tragic heroes that they represent. This, in turn, will help readers better understand Shakespeare's tragedies as well as make for a very interesting comparison of the two plays. I will also rewrite both plays—which will be one act—to demonstrate how the role reversal will turn tragedies into stories of triumph.

Learned Coping Skills Through Group Intervention To Ease Adjustment Into Prison

Crystal Contreras, Graduate
Jolene Oss, Undergraduate
Dr. Kayleen Islam-Zwart, Psychology

Women in prison experience a number of psychological difficulties. Rates of mental illness among female offenders are estimated at 30% (Pinta, 2001). Oftentimes, a present mental condition exacerbates the distress an offender experiences when incarcerated (Teplin, Abram, & McClelland, 1996; Jordan, Schlenger, Fairbank & Caddell, 1996 in Loper, 2002). As a result, offenders are in need of early treatment interventions specific to psychological problems and to facilitate transition into prison. For example, during the early period of adjustment, the offender may experience a number of emotional, physical and behavioral problems where the offender has to learn to deal with adverse living conditions, loss of privacy, excess noise, feelings of isolation, boredom, and personal threats (Wilfley, Rodon, & Anderson, 1986 in Negy, Woods, & Carlson, 1997). Problems of adjustment within the prison system occur when the offender is in transition and lacks the skills to cope with her environment. Therefore, early intervention is critical. The present project developed and tested a group intervention focused on helping female offenders learn new coping skills to increase adjustment. Further information will be presented.

Relationship Between Quadriceps Muscle Weakness and Relative Disuse in Patients with Knee Osteoarthritis: Pilot Data

Elizabeth Contreras, Undergraduate
Dr. Ryan Mizner, Physical Therapy

Osteoarthritis (OA) is the number one source of disability among elderly persons. Frequently developing in the knee, OA often creates mobility restrictions contributing to a decrease in daily physical activity and muscular stress of the lower extremity. The natural adaptation of reduced muscular stress is disuse atrophy. We hypothesize that inactivity coupled with reduction in muscle recruitment during walking contributes to quadriceps weakness. Patients with OA will have weaker quadriceps muscles, lower daily step frequency, and lower quadriceps muscle recruitment when they walk. Testing included an isometric quadriceps muscle strength assessment, three-dimensional gait analysis in conjunction with electromyography of the quadriceps muscle. Subjects also wore ankle step-counter that tracked the number and frequency of steps. Three participants have completed testing: one TKA and two healthy participants. The person with OA was much weaker and was waking half as much as the healthy cohort. The OA subject also had lower average quadriceps muscle recruitment during gait. Thus far, our hypotheses are supported by our results, but more participants are needed to make meaningful conclusions.
Taking Care of Business  
Lillia Cruz, Undergraduate  
Dr. Philip Watkins, Psychology

In our study we investigated the impact of grateful processing on bringing closure to unpleasant emotional memories. After recalling an open memory, participants were randomly assigned to one of three writing conditions. For three sessions, participants wrote about neutral topics, the unpleasant event itself, or about positive consequences from the event from their open memory that they felt they could now be grateful for. Those who were assigned in the grateful condition showed more memory closure, less unpleasant emotional impact, and less intrusiveness of the open memory than the other writing conditions.

Phylogenetic Relationships of Fossil Penguins from Seymour Island, Antarctica  
Aj DeBee, Undergraduate  
Dr. Judd Case, Biology

Sphenisciformes (penguins) are a highly derived order of birds which have evolved specialized morphology that allows for a primarily aquatic lifestyle. The order is represented by 17 extant species, and at least several dozen extinct fossil species. Although their fossil record is extensive the phylogenetic relationships of these extinct penguins remains largely unknown. Understanding these relationships will shed light on the phylogenetic relationships of extant forms. I compiled and analyzed over 100 morphological characters from both the humeri and the tarsometatarsi of 15 fossil taxa from Seymour Island, Antarctica. Using a MacClade data matrix and Phylogenetic Analysis Using Parsimony, I found several potential evolutionary relationships between these Seymour Island taxa. Preliminary analyses include findings that taxa of smaller penguins, such as Delphinornis and Mesetaornis, are more primitive than taxa of larger penguins such as Anthropornis.

Fascism and Its Connection to America  
Deseure DeBerry, Undergraduate  
Dr. Doug Orr, Sociology

Fascism was initially not of interest to me at all, as it seemed to be a thing of the past that needed no studying, since the evil ideology had died with Hitler and Mussolini in the early/mid 1900's. The general public and myself knew that fascism in itself was evil; it was seen as a major force behind the atrocious acts done by the Nazis before and during World War II. Such history possibly being compared with what is happening with America and its government today (as it has with recent books and articles) however, made me realize that my ignorance about fascism needed to be addressed in order to try to confirm or deny such allegations. This research paper, therefore will put my ignorance to rest, answering several questions had, such as: What is the definition and ideology of fascism? How did fascism become so popular in the past? Why was fascism later deemed as dangerous for humanity? Why is America being implicated in becoming a fascist state? Answering such would, if needed (and confirmed), address that fact that the danger of fascism is real, as it was in the past.
Equine Assisted Psychotherapy
Autumn Deda, Graduate
Kate Andrews, Misty Jenkin, Stacia Kapelke, Nicole Neudorfer
Dr. Elizabeth Kohler, Occupational Therapy

A critical problem facing mental health practitioners, such as occupational therapists and mental health counselors, is the need for more effective intervention techniques for addressing depression and anxiety in children exposed to domestic violence.

The purpose of this study is to investigate the use of Equine Assisted Psychotherapy (EAP) as an alternative intervention approach for diverse populations of children who have been exposed to domestic violence and experience difficulties with social participation. Additionally, an occupational therapist's role as an EAP team member was explored.

Using qualitative, descriptive and participatory action research design, this study investigated a Native American mental health counselor's use of EAP practice when treating ten randomly selected Native American children identified with anxiety and depression secondary to domestic violence. A phenomenological process was used to guide interviews with the counselor while the Children's Depression Inventory (CDI) was administered to both caregivers and children as a tool for self-identification of emotional issues.

Interview results revealed clues regarding the type of emotional profile seen in children selected for EAP intervention. Likewise, the counselor found the CDI to be a valuable tool for guiding treatment protocols.

Sources of Gratitude and Happiness
Erica Delgado, Undergraduate
Dr. Philip Watkins, Psychology

Although research has shown that gratitude is strongly predictive of happiness, we do not know if sources of one's gratitude matters to one's happiness. For example, are people who are more grateful toward their mother happier than those who are more grateful toward their teachers? Do sources of gratitude matter, or is it simply that being grateful is what is important to being happy? This study attempted to investigate this issue. I asked about 80 students to report on how grateful they were toward a number of different sources of gratitude (e.g., mother, siblings, friends, teachers, etc.) and I also administered two happiness measures (the Satisfaction with Life scale and the Subjective Happiness Scale). I expect that individual happiness will vary depending on the source of one's gratitude. The results of this study should enhance our understanding of the important link between gratitude and happiness.

The Spectrum of Morality in Realism
Nicola Derbyshire, Undergraduate
Dr. Judy Logan, Literature

Realism, a mid-nineteenth century reaction to the literary movement of romanticism, dealt with the portrayal of people and society as they were in real life. Unlike romanticism, in realism there are no clear heroes or villains but only characters with varying degrees of morality. This spectrum of moral values is the crux of realism, allowing rounded characters to react to the situations they find themselves in. Through the challenges they face they identify themselves as likable or unlikable rather than good guys or bad guys. The characters in Democracy by Henry Adams, Washington Square by Henry James, The Rise of Silas Lapham by William Dean Howells, and The Damnation of Theron Ware by Harold Frederic are prime examples of various levels on the morality continuum, proving their moral strength (or lack thereof) by their ability to stand on their own feet and make decisions that benefit their souls.
Meth Head
Ivy DeSpain, Kayla Jerome, Eric Schafer, Undergraduates
Heather Robinson, Communication Studies

This is a visual argument on the drug Methamphetamine and the affects it had on a user. It is 8 minutes long and gives a basic background on what Meth is, what it does to a user, and how it affects the user's loved ones.

Untitled
Monica DeWitt, Undergraduate
Shelly Murney, Art

My life has been influenced by photography since I was twelve years old. My first job I worked in a portrait studio. In high school and college I have further explored my love for photography. I use black and white photography and work in a traditional dark room. My works are what moves me in life. I love photographing landscapes and object with texture that brings out aspects that people never would have realized.

Development of Reliable Synthetic Methods for Asymmetric Di-Functionalization of Benzo[2,1,3]thiadiazole
Daniel Dodge, Undergraduate
Dr. Tony Oertling, Chemistry; Dr. Philip Sullivan Chemistry (UW)

Currently, copper, the material that computer chips are usually made from, is the limiting factor for the speed of information and data transfer. However, the use of electro-optical systems may likely be used to increase the speed at which information is transferred. Creating molecules whose electron clouds can be perturbed by an electrical field is the first step in achieving this goal of faster information transfer. This can be done with nonlinear optical chromophores, which are made of organic compounds with a donor-bridge-acceptor molecular architecture. This architecture creates an asymmetrical electron distribution throughout the molecule, which makes it dipolar and potentially hyperpolarizable. Therefore, if the compound has a high molecular hyperpolarizability, beta, it will serve well as a chromophore. The experimental goal was to research reliable synthetic methods to di-functionalize benzo[2,1,3]thiadiazole. Di-functionalization would allow for incorporation of benzothiadiazoles into extended pi-conjugated chromophoric systems. Synthesis would be followed by characterization studies on modified chromophores to determine the implications of benzo[2,1,3]thiadiazole on molecular hyperpolarizability and second order non-linear optical properties.
Testing the Reliability and Accuracy of Portable Handheld Delta Nu Raman Instrument and the Identification of Powders and Pharmaceuticals
Devon Donohoue, Undergraduate
Dr. Peter Bilous, Chemistry

Advancements in Raman spectroscopy have made it possible to analyze small amounts of unknown substances in a field investigation setting. This study investigates the effectiveness of the Portable Raman equipment given the existing libraries and databases. Through comparison of the performance of the Delta Nu Inspector Raman instrument in an ideal laboratory environment, to the performance of the instrument in a non-ideal, field investigation environment, it was discovered with varying sample sizes, that the instrument produced reliable results as a portable instrument to a minimum of a 2mm square sample. This information can provide new techniques and accurate results to investigators for preliminarily identification of unknown substances at crime scenes.

Structural Determination and Magnetic Behavior of Two Novel Compounds: [Co0.53Cu0.47(HF2)(pyz)2]BF4 and Ni(NCS)2(pyzdo)2 (pyz = pyrazine, pyzdo = pyrazine-N,N-dioxide)
Jeff Donovan, Undergraduate
Dr Jamie Manson, Chemistry

Two new coordination polymers, [Co0.53Cu0.47(HF2)(pyz)2]BF4, and Ni(NCS)2(pyzdo)2, have been synthesized and structurally determined using single crystal X-ray diffraction techniques. The former is a Cu2+/Co2+ doped 3D system which can be described as two squares made up of M-pyz-M bonds (where M could be either Cu or Co) which are cross-linked between the metals with the bifluoride ion, HF2--; the BF4-anion then occupies the body-center position of this quasi-cube. The second compound is made up of 2D sheets which contain Ni2+ cations interconnected through the ligand pyrazine-N,N-dioxide; each of the nickels is then capped with two thiocyanate, NCS-, anions. Initial magnetic measurements indicate that both of these compounds behave as antiferromagnets. The temperature dependence of the magnetic susceptibility for [Co0.53Cu0.47(HF2)(pyz)2]BF4 indicates that ordering occurs below the lowest measured temperature of 2 K. The magnetic ordering for Ni(NCS)2(pyzdo)2 is shown to take place at approximately 18 K.
Home Exercise Equipment Availability and Use in Patients with Cardiovascular Disease
Justin Drake, Graduate
Dr. Tanya LaPier, Physical Therapy

Introduction: To most appropriately prescribe home exercise, physical therapists must understand patient accessibility to equipment for exercise at home. The purpose of this study was to describe home exercise equipment availability and use in patients with cardiovascular disease (CVD). Methods: Study participants were 50 patients admitted to the hospital for a CVD diagnosis. Patients who could not understand English, were not cognitively intact, or had undergone cardiac transplantation or a ventricular assist device placement were excluded. This prospective descriptive study used a sample of convenience recruited from a regional medical center. Patients completed heart health information surveys containing information about home exercise equipment ownership, knowledge and acceptance. Results: The most commonly owned home exercise device was an exercise bike (32%). The most regularly used home exercise device was an exercise video (14%) and the most enjoyable device used was the treadmill (58%). Conclusions: Physical therapists must explore alternative exercises that do not require special equipment to improve patient adherence with a home exercise program.

Weathered
Sara Dunbar, Undergraduate
Shelly Murney, Art

The pictures I usually take are of old, worn down, weathered objects that have been subjected to all four seasons more than once. This particular piece was shot in my backyard and is of a rusted, old hinge that was on a door to the barn. I chose to develop the picture on black and white paper for I feel it gives the picture an even older look to it. I like how you can see the objects age and the wear and tear it has gone through over the years.

Neuromuscular Control of the Lower Extremity by Female Athletes during a Step-Down Task
Corey DuPont, Graduate
Dr. Ryan Mizner, Physical Therapy

The step-down task is a common screening tool to stress the gluteal muscles and identify female athletes who may be at high risk for knee injury due to poor leg control. There is still little known regarding what neuromuscular factors are involved in control of limb posture during this task. The purpose of our study was to examine leg orientation and muscle coordination during a single leg step-down task. Thirty-seven female collegiate athletes participated in an electromyography and 3D motion analysis of a step-down task. The quadriceps muscle had the most activation followed by the calf, hamstring, and then the gluteal muscles. A knee bending with hip bending strategy results in greater gluteus medius activation and less calf, while knee bending coupled with ankle bending elicits greater response from the calf and hamstring muscles. The step-down task elicited surprisingly low activation from the gluteal muscles therefore, it may not be an effective and truly challenging activity to evaluate hip musculature control.
Team-Based Learning in Teaching Ethics
Jeffrey Ewing, Undergraduate
Dr. Kevin Decker, Philosophy

"Team-based learning" is a particular instructional strategy designed to overcome some problems of traditional instruction by means of making learning teams the primary classroom unit. Advocates of "team-based learning" observe that such a strategy improves upon more traditional methods of instruction in multiple important ways. My presentation aims to assess the effectiveness of "team-based learning" in the instruction of ethics. Such research has broader implications on the effectiveness of "team-based learning" in theory-based disciplines as a whole, such as philosophy, theology, sociology, anthropology, etc. My presentation looks at a variety of factors in this assessment, such as grades, student perspectives, attendance, etc.

Detachment: A Result of Natural Disasters, Physical Attack/Assault, or Individual Response?
Kristin Fairbanks, Undergraduate
Alexandria Harper, Krystal Schulz
Dr. Kayleen Islam-Zwart, Psychology

After experiencing a traumatic event, coping mechanisms are put to the test. Negative coping skills, such as social withdrawal and detachment, can sometimes result from trauma experiences. Using archival data from the National Comorbidity Survey (Kessler, 2000), we examined the difference in detachment as a result of trauma experience, specifically natural disaster (fire, flood, etc.) compared to physical attack or assault, for 813 participants. Our hypothesis was that individuals who experienced personal trauma (physical attack/assault) were more likely to describe greater difficulty feeling close to others and continue to feel detached. Results showed no difference in detachment between the trauma groups. However, participants who reported feeling detached from others after the trauma continued to report detachment in later interpersonal relations. These significant findings coincide with previous data linking detachment with trauma.

Maximum Speed
Ashley Falconer, Undergraduate
Shelly Murney, Art

My name is Ashley Falconer. I am a Senior at Eastern Washington University, majoring in Studio Art with an emphasis in Digital Art. I work with an array of media including painting, drawing, and photography. Currently, I am working with film photography, emphasizing architecture. Recent photographs include those I took while in New York City, San Francisco, and here in Spokane.
Relationship Between Hip Mechanics and Knee Loading During Single Leg Landing In Female Athletes
Rory Fletcher, Graduate
Dr. Ryan Mizner, Physical Therapy

Female athletes that participate in cutting and pivoting sports are at risk for non-contact knee injuries. Many of the injuries occur during a single leg landing. Hip joint position and torques could have a substantial influence on the loading of the knee joint and are important to consider when assessing knee injury risk. The purpose of this study was to evaluate how hip mechanics can influence the landing strategies of female athletes. Thirty-seven female underwent movement analysis of the lower extremity during a single leg land. The peak joint angles and torques were calculated during the force absorption phase of landing. For all 3 movement planes, hip angle at initial contact had a positive correlation with peak hip angles during landing. Greater hip joint collapse during landing was associated with lower knee bending torque. The results support the hypothesis that hip mechanics can influence knee loading during landing. The strategy of using the hip to absorb landing momentum instead of the knee is related to the hip's position at initial contact.

"Probably for the Rest of our Lives": Community-Building in the University Environment
Edwin Fonseca, Undergraduate
Dr. Sue Wright, Sociology

Starting from a community-based research (CBR) project, I seek to better understand community building in the university setting. While scholars in various social science disciplines present community in different ways, following Peck (1987), I recognize the complexity of authentic community as "an interconnected, profoundly interrelated" set of factors that involves inclusivity and communication to resolve conflict and as a four-stage process of development that builds on the strength of these two primary characteristics. While I see that constraints abound for building authentic community on college campuses, the work of Boyer (1990) and others, helps us see the potential for the university setting to foster community, with collaboration emerging as a key component in building communities. In this CBR project we explore community building among students at Eastern Washington University, especially among students in the Living Learning Community (LLC) to determine whether analysis of Peck's stages of development in authentic communities can help us find a way to navigate the problems of communities in the university setting. I describe the process of community building among students in the LLC and suggest ways to help foster processes at different levels within the institution for building authentic communities to enhance student success.
"Bridging Communities: Collaboration for West Plains Youth"
Edwin Fonseca, Undergraduate
Niki A. Fosjord, Deborah H. Proffitt
Dr. Sue Wright, Sociology

The EWU academic strategic plan promises "a learning environment that fosters connections among disciplines, between faculty and students, and with the campus and community." In addition, the recent document "Building a Living and Learning Community for Greater Spokane: Vision, Mission and Goals for Eastern Washington University in the University District" (January 2007) highlights ways to "bring our community to the university and the university to the community" and "to make a difference for our university and for our community, and become leaders." To this end, this project explores the process of community building, particularly with regard to the links between the university and the West Plains area. Specifically, the research will focus on the Cheney Hangout, a collaborative community action to provide 9-13 year-olds a safe space to interact after school and during the summer at no cost to the kids or their parents. Analysis of program data from 2005-06 and information from interviews with former program staff, affiliated faculty, university staff, EWU students, and area stakeholders will be used to 1) provide a better understanding of the process of community building that involves the university and the broader university district, 2) create a positive after school/summer option for local 9-13 year olds, and 3) help create a program that is sustainable for the foreseeable future.

Lessons from the Taiwanese Experience with English Second Language Acquisition: Implications for All International Students
Trisha Fort, Emily Weng, and Sunny Weng, Graduates
Dr. Harvey Alvy, Education

Successful Second Language Acquisition is a universal educational necessity due to increased human migration and the desire to communicate effectively. This study researches the most effective methods to teach English Second Language Acquisition by focusing primarily on the Taiwanese, United States, and European educational systems. The student researchers found that educational expectations of learners, teachers, and parents differ depending on the cultural setting. For example, the cultural setting may determine a more traditional teacher-centered approach, in contrast to a more student-centered approach. The different approaches may cause confusion for students when they transition between cultures and strategies. Based on the research findings, the presentation will describe promising methods and strategies for teachers and students to succeed, regardless of the cultural setting, when working with international students on English Second Language Acquisition, and the social and emotional issues related to acquisition.

HPPV Bicycle
Cody Freeborn, Undergraduate
Grant Marchelli, Brain Podolinsky
Dr. Richter, Engineering and Design

When one is competing in the Human powered paper vehicle competition they must first consider vehicle design. When our group went about researching different types of vehicle designs, we looked at many of the previous year's entries and winners. After Looking at many different vehicle designs, we chose to use the basic bicycle design. We thought this would be a good choice not only because it is based around the use of triangles as the structural shape, but because the bicycle has been a reliable form of transportation for many years. After some discussion about different drive systems, we opted to use a bicycle chain drive as well. Not only did we know this would not break, the availability of chain was greater than that of any other drive type. Though the bicycle design and drive is a good one, a few small inaccuracies in our drive system causes it to fail during the competition.
Graphical Simulation of a Robot Algorithm
David Freiberger, Graduate
Tyler Jones
Dr. Claudio Talarico, Esteban Rodriguez-Marek, Electrical Engineering

A graphical simulation interface is a useful tool for analyzing and tuning real-world physical systems. This paper outlines the design of a MATLAB-based software simulator used for a maze solving robot. The interface is designed to be user friendly, allowing the user to edit and resize the maze and specify different algorithms to evaluate. The program simulates the robot's movement, showing in real-time the position of the robot and its path through the maze. Simulation of the maze and robot's algorithms allows the designer to quickly analyze how wall combinations and dead ends might affect the performance of specific algorithms, before their final implementation into a microcontroller.

Coil
Heron Furtwangler, Undergraduate
Shelley Murney, Art

My name is Heron Furtwangler, I am a student at Eastern Washington University, and I am currently working on completing my associate's degree in art. I work primarily in film, both in still photography and in motion pictures. My focus is on obsolete technologies and abandoned structures, as well as juxtaposing contrasting elements. I enjoy using light and the lack thereof to accent and highlight certain perspectives. I am currently exploring alternative photography processes, as well as working to incorporate sculpture into my photography. My long-term goal is to be a filmmaker, and in my spare time I work on short films, which I have been approaching on a psychological and philosophical level in creating a series based on individual characters.

Interacting Partners for Putative (Arabidopsis thaliana) Cytochrome P450 Reductase III
Isaura J. Gallegos, Undergraduate
Janani Varadarajan, Dr. Ronald Coolbaugh, Biology

Cytochrome P450 reductases are essential for the function of another family of enzymes called cytochrome P450's. Cytochrome P450 reductases interact and transfer electrons to P450 enzymes to make them catalytically active. There are two known Arabidopsis cytochrome P450 reductases, ATR1 and ATR2. Analysis of the Arabidopsis genome revealed a third putative ATR, ATR3, which has been partially characterized. This project tested the interaction between ATR3 and three P450 enzymes, CYP701A3, CYP76C2, and CYP72A7 using the SRS yeast two-hybrid assay. ATR3 was cloned into the "bait" vector, the candidate protein partners were each cloned into the "prey" vectors individually. Yeast cells were transformed with the "bait" and the "prey" constructs. Interaction between the "bait" and "prey" was tested by checking for growth at 37Â°C in glucose or galactose medium. None of the three proteins tested displayed growth at 37Â°C.
Wild Lifelines for Kootenai County, Idaho: Determining Priorities for Protection in a Rapidly Growing Region

Timothy Garceau, Graduate
Dr. William Kelley, Urban and Regional Planning

Kootenai County, Idaho is one of the Inland Northwest Land Trust™s (INLT) three primary service counties and is currently experiencing rapid population growth and accompanying development. In order to focus conservation efforts in the county, it is important for INLT to have a firm conservation strategy based on the lands of highest ecological value. This study utilized ArcGIS 9 to analyze species diversity and threatened land cover types in order to determine the most important areas warranting protection. Species were placed into various groupings for analysis based on a range of common traits. Repeated distribution â€œthemesâ€ were recorded and then utilized to create a series of conservation strategy alternatives. Alternatives were evaluated based on the land protection goals of the INLT in order to determine that, in order of recommended importance, the southeast county and Coeur d’Alene River-Chain Lakes area, the northwestern county â€“ Selkirk Mountains area and the Mica Peaks area are the strategies which will, if used, help INLT to effectively achieve its mission.

Use Of Paper Products And Wood Glue To Form A Composite Building Material

Terence Geyer, Graduate
William Loendorf, Engineering and Design

In order to help build an information base on the materials used in the Human Powered Paper Vehicle competition, testing and research was conducted in several stages on variety of differently dimensioned cardboard tubes, shredded cardboard, and a variety of wood glues. Testing methods included the use of a tensile tester to determine the strengths of the cardboard tubes, the wood glues, and various combinations of shredded and compacted cardboard mixed with wood glue. Different drying methods, including the use of heat, hole drilling, wood welding, and time were also tested. Some selected samples of the composite material, when dry, were found to be easily modified by standard machining methods including drilling, sawing, and sanding. Additional testing included building a bike frame from the composite material and placing it in service. The results of the testing and research yielded a formula for a strong composite material that did not fail under its intended usage.
Examining the Effectiveness of the Social StoryTM Intervention in an Educational Setting with a Child Diagnosed with PDD-NOS.

Ashley Graham, Graduate  
Dr. Kurt Stellwagen, Dr. Susan Ruby, Psychology

The Social StoryTM intervention was introduced by Gray (1993) as a intervention for individuals with autism. A Social StoryTM is a short story written from the perspective of the child that describes a specific situation, skill, or event. At present there is a lack of research measuring the effectiveness of the Social StoryTM intervention with individuals diagnosed with a Pervasive Developmental Disorder (PDD) other than Autism. Children with PDDs other than autism are commonly integrated into mainstream classrooms but are at risk for social isolation and academic underachievement. Integrating Social StoriesTM into the classroom for these children has the potential to promote involvement both academically and socially. The goal of this study is to improve task completion and teacher communication. A fifth grade male, diagnosed with Pervasive Developmental Disorder Not Otherwise Specified (PDD-NOS), read two Social StoriesTM each day in his classroom before school started. Data was collected on the frequency of questions asked as well as the number of question marks placed on daily assignments with the goal of increasing both criterions.

Spokane's University District: Past, Present, and Future

Chris Green, James Depaolo, Shawna Ernst, Josh Hall, Joel Whitman, Skyler York, Graduates  
Dr. Dick Winchell, Urban & Regional Planning

Today, Spokane's Riverpoint Campus is bustling with students and construction cranes. City leaders envision this "higher educational park" as the centerpiece of a thriving mixed-use quarter similar to those found around urban campuses in Portland, Seattle, and Vancouver, B.C. However, this is merely a stage in a process that began when Expo '74 cleared the railroad tracks on the site and continued through several competing neighborhood plans during the 1980s, 1990s, and early years of this century. Most recently, the Smart Growth movement has inspired decision-makers to reexamine the potential for a truly "urban" campus at Riverpoint. A variety of sources, including community groups, graduate student studies, and reports from outside consultants offer pieces of a vision for the future of Spokane's youngest neighborhood.

Does a Match Between a Student's Implicit Theories or Goals and the Goals Emphasized in the Classroom Increase a Student's Motivation?

Nancy Guillen, Undergraduate  
Dr. Amani El-Alayli, Psychology

Some past studies have shown that a motivational climate that emphasizes learning goals produces better motivational outcomes than one that emphasizes performing well. Others find that the reverse may be true for students who generally pursue performance goals. The current study examined whether this idea of person-environment fit applies to long-term situations by having college students report the motivational climate of the college courses in which they were most and least motivated. It was hypothesized that students would be most motivated in the college course in which their implicit theory and achievement goals matched those of the motivational climate and least motivated in the college course in which a match did not exist. However, the study found that all students reported more of a learning-oriented climate in the class where they were most motivated. The possibility that a learning climate may be better for all students is discussed.
Identification and Reconstruction of Ingested Prey Fish Lengths Using Diagnostic Bones

Jennifer Gunnarson, Nick Bean, Undergraduates
Dr. Allan Scholz, Biology, Bill Baker, Washington Department of Fish and Wildlife

"Diagnostic" bones are useful for identifying prey fishes in the diets of piscivorous fish and the types of fish bones found in archeological sites. Between genera and species of fishes there are distinct characteristic differences in the shapes of diagnostic bones that identify them. Our objective was to develop a dichotomous key to identify the diagnostic bones of Eastern Washington fishes. Fish were measured (total length in mm) and either fed to dermestid beetles or boiled to remove flesh from bone. Diagnostic bones (cleithrum, dentary, opercle, preopercle and pharyngeal arches) were extracted and measured to the nearest 0.01 mm using a dial caliper. Measurements of original fish length (dependent variable) and its diagnostic bones (independent variable) were related in a linear regression equation. A fisheries biologist or archeologist can use this regression equation to estimate fish length from a diagnostic bone measurement.

An Exploration of Contemporary Gay Male Poetry

Jeremy Halinen, Graduate
Christopher Howell, Creative Writing

What makes a poem a "gay" poem? Does it have to be written by a gay man? Does it have to include content related to a gay sexual orientation? What does the absence or presence of such content signify in the work of a gay male poet? Are poems that announce the sexual orientation of the speaker political? What social function do such poems fill? Can "gay" poems speak to a broader audience? Should they attempt to? These questions and others will be answered through a tour of and commentary on a wide variety of poems by gay male poets (mostly contemporary) and by a contemporary male poet who isn't gay. Some poets whose work will be under scrutiny include Antler, CAConrad, Dennis Cooper, Edward Field, Tony Hoagland, Charles Jensen, Richard Siken, and Aaron Smith.

The Treatment of Humanity in the Poetry of Robinson Jeffers

Jeremy Halinen, Graduate
Christopher Howell, Creative Writing

Because of his outspokenness against humanity for causing war and its cruel effects, modernist poet Robinson Jeffers is often maligned as a traitor to his own species and his work dismissed without discussion. Such cursory dismissal is an egregious mistake. Jeffers is a serious poet whose work deserves a thorough and close inspection. What initially might seem off-putting on a casual encounter will likely be understood and perhaps even agreed with upon a deeper engagement with the texts.
Contemporary Magic: The Poetry of Denver Butson
Jeremy Halinen, Graduate
Christopher Howell, Creative Writing

Like the work of all contemporary poets, the poems of Denver Butson have not yet stood the test of time. They have not had the chance. Yet, in another sense, they have, as they have been tested and praised by poets of prior generations as accomplished and varied in their poetics as popular Billy Collins and prolific Theodore Enslin. Not surprisingly, considering the sources of the praise bestowed on it, Butson's work is astutely attentive to sound, to the musical possibilities inherent in language, and to the necessary qualities of repetition and variation. His lingual cadences tend to mimic those of a mind in a state between waking and sleeping, and he fills those cadences with images that borrow heavily from a dreamlike world but that nevertheless are positioned in a world that fits our waking expectations.

Use of Oscillating Positive Airway Pressure to Prevent Pulmonary Complications in Patients Recovering from Spinal Cord Injury (SCI)
Meghan Hamilton, Graduate, Dana McPhee
Dr. Tanya LaPier, Physical Therapy

Objective: Pulmonary complications are common in patients following SCI. Mucus retention in the lungs occurs secondary to decreased mobility, bed rest, impaired or absent cough, and or reduced vital capacity. Retention of pulmonary secretions increases risk for infection and development of pneumonia. The purpose of this study was to determine if oscillating positive airway pressure (OPAP) therapy improved pulmonary function, incidence of pneumonia, and hospital length of stay following SCI when compared to standard of care treatment alone. Methods: Participants were 6 individuals admitted to a medical rehabilitation center for their initial SCI. Data collection included baseline information, course of recovery, type of complications, and clinical testing. Results: To date, 6 patients have been enrolled in the treatment group of the study. No adverse outcomes have occurred and 5 of the participants were able to consistently perform OPAP. Conclusions: Several factors have been identified in this pilot study that threaten the internal validity of the data.

Gratitude Predicts Future Happiness
Angela Harmon, Graduate, Kimberly Tolley
Dr. Phil Watkins, Psychology

Research has shown that people value happiness, but we have much to learn about what causes happiness. In this study we investigated whether trait gratitude predicts increased happiness. At Time 1 we administered the GQ-6 (a valid trait gratitude measure), along with various happiness measures. At Time 2 over three weeks later, we administered the happiness measures again. GQ-6 scores at Time 1 reliably predicted happiness measures at Time 2 after controlling for Time 1 happiness (p<.001), supporting our hypothesis that trait gratitude predicts increases in happiness. Our results add to those of several other studies supporting the theory that gratitude is a causative factor in happiness. Although the science of gratitude is young, our results add to the growing literature supporting the idea that gratitude is an important facet of the good life.
Identification of the Bacterial Community of Medical Lake, Washington, Using Molecular Methods
Gwendolyn Hartman, Graduate
Dr. Prakash Bhuta, Dr. Sidney Kasuga, Biology

Bacteria play an important role in processes such as fermentation, infection and recycling of organic and inorganic compounds. In aquatic systems, bacteria decompose detritus to release terrestrial carbon and act as a food source for other organisms. Historically, the bacterial contribution to aquatic systems has been largely ignored by ecologists. This is principally due to difficulty in studying and identifying bacteria; it is estimated that only 10% of bacteria from any environmental sample can be cultivated under laboratory conditions. For example, the limnology, fish population and water quality of Medical Lake, Washington, have been studied, but no research has examined the bacterial constituents of the lake. Recent advances in molecular technology now provide an avenue to address this question. Therefore, in this study of Medical Lake, molecular methods are used which do not require growth of bacteria in the laboratory. Bacterial 16s rRNA genes will be amplified, cloned and sequenced, then compared against international databases for identification. Using molecular techniques, I will develop a more complete picture of the bacterial composition of Medical Lake, adding to the existing biological profile of the lake.

Relationship Between Muscular Strength and Lower Extremity Posture of Female Athletes During Drop Vertical Jumps (DVJ)
Chris Harty, Graduate
Dr. Ryan Mizner, Dr. J. Kawaguchi, Dr. T. Chmielewski, Physical Therapy

Landing from a jump has been identified as a common mechanism of ACL injury in female athletes. Women commonly adopt high risk landing postures of reduced hip and knee bending with collapse into a knock-kneed position. The purpose of this study was to determine the relationship between leg and trunk strength and the lower extremity posture during a DVJ. Thirty-seven female collegiate athletes from cutting and pivoting sports participated. Strength of the leg muscles was determined isometrically with peak torque normalized to body weight. Trunk testing consisted of timed abdominal crunches and back extensions. Athletes underwent 3D motion analysis of a DVJ task from a 31cm box. Athletes with greater strength of the quadriceps, hamstrings, and calf achieved a more bent posture at the hip and knee while avoiding a knock-kneed position. Surprisingly, hip and trunk muscle strength did not relate to joint position. Weakness in thigh and calf muscles may be of greater significance to knee injury risk that muscles of the hip and trunk.

Implementation of a SCARA Robot in a Manufacturing Design Solution.
Ryan Healea, Undergraduate
Jeff Donnerberg, Engineering and Design

As a class assignment a team of EWU students were asked to research, design and fabricate an automated assembly system for Omega Pacific. Since the company had already invested in SCARA robots, manufactured by Adept, the team decided to incorporated it into a work cell. The student team researched and accessed the capabilities of the robot in combination with pneumatics and mechanical systems to meet the desired need of the assembly system. The assembly system evolved into a Computer Integrated Manufacturing system (CIM) joining automation, Pneumatics, and mechanical systems into one work cell. The CIM system replaced the manual assembly of a carabineer gate manufactured by the Omega Pacific Company. This CIM system incorporates techniques like using a teach pendant, repeatability, accuracy, dynamics, and physics. This undergraduate research project taught the principles of automation theory, its functions, and their programbility in the context of a practical application for industries.
Satan in the Old Testament: From Common to Diabolical
Candice Helsing Undergraduate
Dr. Georgia Bazemore, History

This paper will examine the evolution of Satan, from common noun to proper noun, in the Old Testament. It will be posited that, prior to the Babylonian Captivity, ca. 568 B.C.E, the ancient Hebrew term "satan" was used as a common noun, descriptive of any random character fitting the role of its root meaning, to "obstruct" or "oppose." It was not used to denote evil in any sense until after the Jews returned from the Babylonian Captivity and intra-Jewish conflict began to build. After the captivity period, "satan" was used in the Jewish community to malign opposing Jewish factions. Accordingly, by comparing Pre-Exilic versus Post-Exilic literature, it is clear that "satan" was never the leader of God's opposition in pre-Exilic Jewish theology.

A Critique of Pure Science: The Implications of Hume and Popper on Scientific Knowledge
Matthew Holmes, Undergraduate
Dr. Kevin S. Decker, Philosophy

The threat of dogmatism is as alive today as it was in Kant's day. Instead of the local church, however, people today dictate their lives based on the latest scientific discoveries. It seems that every day there is some kind of new scientific advancement that changes our lives, often by overturning the advancement we made yesterday. Modern America is filled with an unwavering faith in the abilities of science. In Kant's time they said, "With God, all things are possible." Now we believe the same thing about science. Scientific knowledge, however, is far from certain. The very fact that there are so many contradictions is evidence of the limitations of science. What exactly, then, is certain in science? How much can it really tell us about the world? To answer these questions, we must look to two very different philosophers - David Hume and Karl Popper. It is through David Hume's skeptical argument and Karl Popper's principle of falsification that we can clearly delineate exactly what it is that science can - and cannot - prove.

Frog Egg Fertilization Using Sperm or Sperm Nuclei
Brandon Hopkins, Graduate
Dr. Charlie Herr, Biology

We will compare fertilization rates achieved by injecting single intact spermatozoon or a sperm nucleus into frog eggs of species Xenopus laevis. It is routine in humans to use sperm injection with those whose sperm motility is impaired. The success rates are low (1-5%), but high enough for some to opt for the procedure. During natural fertilization, the spermatozoon does not penetrate the egg; instead, the sperm membrane fuses with the egg's membrane. The outer sperm membrane never contacts the interior of the egg. Stripping the plasma membrane from a sperm and injection of the nucleus into the egg would seem to more closely resemble the natural process.
Sperm will be spun in a centrifuge and resuspended in nuclear preparation buffer (NPB). Half will be treated with lysolecithin to remove the cell membrane. The remaining half will be in NPB until injection into eggs. All injections will be done with a glass pipette pulled to an interior diameter of 7 Å,μm. The injection needle, fitted to a micromanipulator, is attached to tubing connected to a three-way valve so that it can be switched, to provide positive pressure, or vacuum.
West Indian Emancipation, Slavery, and Expansion in the Antebellum South

Lillian (Lili) Hungerford, Undergraduate
Dr. Michael Conlin, History

British abolitionists won a significant victory when Britain liberated 800,000 slaves in their West Indian colonies in 1838. The trajectory of Jamaica, the largest slave economy among Britain’s holdings, inspired American abolitionists and alarmed American slaveholders. In the course of emancipation, Britain had compensated owners and freed slaves after a brief time of apprenticeship. By the 1840s and 50s the economy of Jamaica was dismal, many British planters had fled the island, and sugar production had crashed. White Southerners adduced the example of Jamaica, and to a lesser extent Haiti, where slaves liberated themselves in 1804, to show that emancipation would have disastrous consequences for the South in particular and the U.S. in general. This paper explores the link between Anti-British sentiment, fears of emancipation, and the expansion of slavery into southwestern territory from 1844 to 1861. The perceived failure of “The Great Experiment” of British abolition increased white Southern fears that the British sought to abolish slavery in the Western Hemisphere, including the Texas Republic, Cuba, and even the American South, in order to regain footing in the international market and to weaken the United States. Marrying Anglophobia, a staple value in the United States since the Revolution, with the maintenance of slavery became an expression of American patriotism among Southern planters in the years before the Civil War.

The Effects of the Reading Mastery Program on Children At-Risk for Low Beginning Reading Achievement

Tyler Jack, Graduate,
Dr. Kathleen Waldron-Soler and Dr. Kurt Stellwagon, co-authors
Dr. Susan Ruby, School Psychology

Effective, efficient, supplemental reading instruction is critical to the success of at-risk students. The purpose of this study was to investigate the effects of short-term, supplemental reading instruction using the Reading Mastery program with first graders at risk for low reading performance. Three students at-risk for low beginning reading achievement participated in the study. Using a multiple baseline across subjects design, learners received 9 to 12 weeks of daily instruction with the Reading Mastery, Classic Edition program. The Dynamic Indicators of Basic Early Literacy Skills (DIBELS) Oral Reading Fluency and Nonsense Word Fluency subtests were used to monitor the effects of daily instruction with the Reading Mastery program. Pre- and posttest scores were also collected on the learners using the Woodcock Johnson-Third Edition Tests of Achievement (WJ-III ACH) Basic Reading Skills Cluster (Letter-Word Identification, and Word Attack subtests). Results showed that all learners made significant gains in oral reading fluency and letter-sound correspondence skills as measured by DIBELS. Further, all learners made significant gains in decoding words and nonsense words as measured by the WJ-III ACH. Results are discussed in terms of the implications for effective supplemental reading instruction and the need for future research.
Health Care as a Right or Privilege: A Guide to Universal Coverage
Jeff Johnson, Graduate
Dr. Mary Ann Keogh-Hoss, Health Service Administration

This paper deals with the United States' health care structure, and the failings of the current system with regard to care and affordability. The current state of the U.S. health care system is bleak. Collectively, the U.S. has not performed well on an international scale in providing care to those residing in the country, as is shown by statistical benchmarks. Nonetheless, health insurance costs have risen exponentially, and the uninsured are rising in a correlating fashion. Universal coverage with a single payer system and one risk pool would raise health standards within the country, and keep costs at a minimum. Within the paper, a breakdown of the cost savings are given for the aforementioned structure. A case study with Canada reveals that such a structure can work. Health insurance should be a right and not a privilege, as it is not a luxury, but rather, a necessity. Additionally, the paper also argues that health insurance should not be a function of race, culture, or income, as is the case in the current system.

Untitled
Julie Kathrens, Undergraduate
Shelly Murney, Art

I am a senior here at EWU earning my B.A. in art. My emphasis is in photography. When taking photographs I am continually drawn to landscape, either rural or urban. What interests me within these realms is varied. I not only look for geometric line, form, pattern, texture, and structure, but a sense of place and history in the location. For example, decaying buildings and winding roads speak of where these things have been, what they are now and where they are going. Recently, I have been concentrating on urban bridges here in Spokane, and have enjoyed the experience of photographing Spokane's historic and modern structures.

Untitled
Devon Kelley, Undergraduate
Shelly Murney, Art

My name is Devon Kelley and I am a junior in the EWU Fine Art Program. Photography is my emphasis, and my interest is in the human figure. I work with traditional dark room techniques and 35 mm film. Women are the constant image in my work, and they are often situated in "ugly" places or interact with their environment in an unusual way.
Oral Reading Fluency by Different Service Levels in an Elementary School
Amanda Kerr, Jill Sullivan, Graduates
Kelly L. Mickelson, Undergraduate
Dr. Susan Ruby, Psychology

Students at all levels are impacted by the rate at which they learn. Past research suggests that students in special education grow at a gradual incline compared to the students in general education. The participants in this study included grade levels two through five, attending a northwest suburban school. This study compares four levels of educational services: general education, title one, individualized intervention plan, and special education. In addition, this study examines the relationship between fall oral reading fluency benchmark scores to spring statewide standardized testing. Results and implications will be reported using a Repeated Measures Analysis Of Variance. Further research is warranted on this subject. This study builds evidence of reliability and validity in a northwest sample.

Freedom vs Control
Edward King, Undergraduate
Dr. Scott Finnie, Social Work

This research examines oppression within the African American community, by focusing on the religious factors surrounding this issue and race. This comparison study of David Walker and Eldridge Cleaver explores slavery, segregation and the black response. Analyzing these issues through the eyes of Walker and Cleaver affords a basis to assess the effects of slavery and segregation on the African-American community. Two crucial observations arise from these two lives and their social context. The tyranny of slavery in America faced by David Walker was eventually replaced by segregation. The remnants of segregation brought forth by slavery's demise transformed into institutionalized racism. The first section of the research will focus on the history of racial oppression in America within the African-American community, beginning with the peculiar institution known as slavery up to the era of the black power movement during the 1960's. The subsequent section will focus upon the life of David Walker and his views on religious oppression of the African American people during slavery. The focal point of the third segment will consist of Eldridge Cleaver's views on racial oppression during the era of segregation. The final section focuses on racial oppression today in the African-American community and what has been proposed to improve the state of the Black community.

Factors Affecting Growth and Success of Stocked Rainbow Trout in Eastern Washington Lakes
Tamara Knudson, Graduate
Dr. Ross Black, Biology

Rainbow trout (Oncorynchus mykiss) are a popular trophy fish commonly stocked into many Eastern Washington lakes in order to provide profitable fisheries which benefit local economies. In Eastern Washington, the number of trout stocked into lakes is solely determined by the size of the lake expressed in surface acres. Currently, other than the size of the lake, no criteria exists for determining an appropriate number of trout to stock within each lake. Although physical and biological factors have been shown to affect the growth rate of trout, these factors are not considered at the time of stocking. Twenty lakes in Eastern Washington were sampled for abiotic variables such as temperature, dissolved oxygen, chlorophyll, nitrate and phosphate, as well as biotic variables such as density and biomass of all prey, and fish composition in each lake. The relationships between rainbow trout growth and other variables are presented.
Landscape as Character: Manmade Geography
Michelle Kozlowski, Graduate
Dr. Jonathan Johnson, Creative Writing

Writers often make use of setting to establish tone in creative works. A specific setting or landscape can even function as a working character in a piece of writing. We will discuss how not just natural, but manmade landscapes (ie. buildings, bridges, streets) find their way into poems and serve as integral components with which the characters can interact in our own pieces as well as in contemporary poetry at large.

Understanding Daughters of the Dust through "Visions of the Daughters of Albion"
Emily J. Kratzer, Graduate
Dr. Christina A. Valeo, English

Film is steadily becoming another genre of literature, and as it grows into an accepted medium of study, we can look at it through the same lenses that are applied to traditional literature. One such lens is intertextual criticism. Some of the complex themes found in Julie Dash's Daughters of the Dust are reflected in William Blake's "Visions of the Daughters of Albion." Both works deal with the issues of rape and slavery. By looking at Dash's film with Blake's poem as a gloss, we can see how these themes are examined in two different time periods and cultural backgrounds, while at the same time realizing the great influence one work can have on another. And, whether this influence is intentional or not, it can further our understanding of both works.

"She Never Loved Me"
Emily J. Kratzer, Graduate
Dr. Jonathan Johnson, Creative Writing

The author will be reading an original short story, entitled "She Never Loved Me." It is the story of a young woman who is collecting her older brother's ashes after he dies in a car accident. It deals with the issues of a family affected by the death of a controlling mother, the tensions between half siblings, and the question of one's ability to move on from such an upbringing.

A Virtual Tour of Expo 74: "Celebrating a Fresh, New Environment"
Ross Lanes, Undergraduate
Stu Steiner Computer Science

On May 4, 1974 the World's Fair opened in Spokane, Washington with the theme "Celebrating a Fresh New Environment." Spokane became the smallest city to host the event. Staying true to the fair's theme the city revitalized its downtown transforming a rundown unsightly rail yard into a beautiful park; now known as Riverfront Park. Our goal was to remember, document, and appreciate how Expo 74 impacted the Spokane region. To accomplish these goals and capture the essence of Expo 74 we generated 3D models and we created a virtual walk-through, utilizing low-polygon videogame modeling and texturing techniques.
A Field Trip to Turnbull National Wildlife Refuge: An Introductory Video

Rachel Lassman, Undergraduate
Dr. Margaret A. O'Connell, Biology

As part of the National Wildlife Refuge System, the mission of Turnbull National Wildlife Refuge (TNWR) is to conserve, protect, and enhance fish and wildlife and their habitat for continuing benefit of people. Educating children about the importance of, and threats to, wildlife habitat, is one way the refuge addresses its mission. Given its proximity to Spokane, TNWR provides environmental programs to over 8,000 students annually. This video is designed to both educate children about the importance of refuges and to provide teachers and classes with necessary information to help them prepare for field trips to TNWR.

Identity Flag

Hyun-Kyung Lee, Undergraduate
Lanny DeVuono, Art

This is a painting that describes what it is like living in a different culture. The flag is a symbol of identity, feelings and struggles that I have been through in America. The feelings of confusion, and separation from the culture I live in as well as the culture I came from. This piece is intended to show understanding for those who have played this role in a society.

The Second Generation of Peruvian Immigrants in Santiago, Chile

Jordan Levy, Undergraduate
Dr. Julia Smith, Anthropology

Following a world-wide trend in immigration, women compose the majority of those who leave their countries in search of work. We see a clear example of this in Chile, one of the wealthiest Andean nations, which has in recent years received much immigration from its neighbors, Peru being the largest contributor. The children of these immigrants, born in Peru or Chile, make up the second generation of Peruvian immigrants.

This project focuses on innovative approaches to promote the acculturation that the children of Peruvian immigrants experience in Santiago. Based on participant observation with an organization dedicated to uniting children of immigrants with Chilean youth, this paper discusses the struggles and benefits that the second generation of Peruvian immigrants encounters. Through this organization, the children of immigrants and Chilean youth share experiences and get to know each other on a friendly basis. This promotes understanding between these two cultural and ethnic groups and decreases xenophobia and ethnocentric perceptions. This exchange is interesting as a contemporary example of accommodation of a minority group and as an innovative model for multi-ethnic communities.
The Peruvian Women Immigrants in Downtown Santiago:
Transnationality and Peruvian Ties in the Popular Chilean World

Jordan Levy, Undergraduate
Dr. Guillermina Walas, Modern Languages and Literatures

Chile, one of the wealthiest Andean nations today, has in recent years received an increased level of immigration from its neighboring countries, Peru being by far the largest contributor. Following a world-wide trend in immigration, women compose the majority of people leaving Peru in search of work in Santiago. An estimated seventy percent of the Peruvian women immigrants work in the domestic service sector, providing nanny services to middle and upper class Chileans. This research project attempts to answer two basic questions: what has happened in Peru such that so many of its citizens are leaving their country in search of work? And, why are so many Peruvian women finding work in Santiago, Chile? Drawing on information gathered from a variety of international academic sources, this research contributes to our understanding of migration and transnationalism, a contemporary theme for the social sciences. The data collected describe the advantages and disadvantages that these women immigrants experience. The conclusions analyze the national, ethnic and cultural tensions that are present in Chilean society in regard to Peruvian immigration.

Assessing the Cumulative Use of Educational Practices in a Professional Program: Support for Collaborative Curriculum Planning

Tammy Lewis, Graduate
Dr. Jane Liu, Education

Educators agree that significant and lasting improvements in the health care system will be a direct result of the quality of education provided to future healthcare workers (Harpaz et al, 2004; Schaefer & Zygmont, 2003; Stephenson et al, 2002). It is critical to examine and reconsider the use of evidence-based teaching strategies (Akinsanya & Williams, 2004) and how these strategies impact learning and student satisfaction. This study uses a quantitative descriptive approach to count and document the type, frequency, and scheduling of various evidence-based pedagogical methods used in a doctoral physical therapist education program. Topics investigated include: textbooks, reading assignments, major graded assignments, teaching strategies, and learning opportunities. The purposes of this study include: 1) to provide an informal, comprehensive program review and 2) to demonstrate how the curriculum, as a whole, impacts students. The results suggest that educators are currently using a wide range of educational practices supported by the best evidence in pedagogy but that lack of collaborative curriculum planning results in an unbalanced scheduling of assignments.

Effects of Human Development on the Home Range Size of Moose and Elk in Spokane County

Cole Lindsey, Undergraduate
Dr. Margaret O'Connell, Biology

Human development in wildlife habitat can have both negative and positive effects on wildlife and these effects vary by species. Elk (Cervus elaphus) and moose (Alces alces) are both large hoofed mammals belonging to the family Cervidae, but elk are herding animals whereas moose are solitary. My research examines whether human development has different effects on the home range sizes of elk and moose. I radio-tracked 7 female elk and 7 female moose during winter-spring 2007 in the Peone Prairie region of northern Spokane County and combined my data with Washington Department of Fish and Wildlife data. I established home ranges for each animal. Elk had larger home ranges than moose regardless of zoning category. County zoning maps were used to categorize levels of human development. Home ranges and the frequency of sightings of both species were compared between categories.
Attitude and Motivation in Learning Language
Wannaporn Lohpaisankrit, Graduate
Dr. LaVona Reeves, TESL

This research paper is focused on social factors in learning a second language which are attitude and motivation. It is very interesting to investigate how language learner is influenced by target language, target language culture, the goal of learning, and language teacher. These factors have important role in learner attitudes and motivation. If the learner has some of these factors, s/he can create some good or bad attitudes in learning depending on what s/he has experienced. Moreover, motivation can change from time to time, regarding to "the goal of the learning a second language" (Jacqueline, 2001). They are integrative, instrumental, causative, resultative, intrinsic, and extrinsic motivation. In my paper, I have discussed about two kinds of motivation which are integrative and instrumental motivation. Therefore, language teacher could create and establish learner's attitude and motivation by studying these factors which involve in attitude and motivation.

Correlations Between Locus of Control and Alcohol Dependence
Debbie Lor, Benjamin Glass, Undergraduates
Dr. Kayleen Islam-Zwart, Psychology

In the search for factors that might contribute to alcohol dependency, it was questioned whether or not the personality variable of locus of control would be related to the dependency. This study investigated whether individuals who are alcohol dependent would possess a different locus of control when compared to those individuals who are not alcohol dependent. This study utilized archival data collected as part of the National Comorbidity Survey (Kessler, 2000). Results indicated a significant difference in locus of control between respondents who are alcohol dependent and respondents who are not. Specifically, people who are alcohol dependent have a more external locus of control compared to people who are not. Therefore, a focus in treating alcohol dependence must be to encourage the development of an internal locus of control, which might give a person the feeling of greater control over addictive behavior.

The Effects of Prolonged Dissonance on Well-Being
Amy Lystad, Graduate
Dr. Amani El-Alayli, Psychology

The purpose of this study was to examine the relationships between well-being and inconsistencies between a person's values and behaviors. To test these relationships participants completed a questionnaire written for the purpose of this study, which assesses discrepancies between their beliefs and behaviors. To assess well-being participants completed the Satisfaction with Life Scale, the Subjective Happiness scale, the Beck Anxiety Inventory, the Psychological Well-Being Scales (short form) and the Positive and Negative Affect Scale. Participants also completed a demographics questionnaire. It was hypothesized that participants with greater discrepancies between their beliefs and actions would report lower levels of well-being and increased anxiety. Data collection in progress.
XRF Analysis of Indoor and Outdoor Dust from the Spokane Area
Noelle Madera, Undergraduate
Dr. Richard L. Orndorff, Geology

Dust represents an important environmental concern in arid and semi-arid regions where the general lack of vegetation allows fine-grained components of soil to mobilize very easily. I applied x-ray fluorescence spectrometry (XRF) to dust samples from the Cheney-Spokane area to determine whether toxic metals posed an airborne hazard to the region. I collected the dust samples by swiping surfaces with a low porosity filter paper with a 12 inch swipe length. Samples were taken indoors and outdoors to determine if there were significant differences in dust chemistry. Samples were also taken at urban, rural, and military sites to determine if there were variable chemical signatures. The filter paper was analyzed with the XRF spectrometer to determine the elemental content. XRF analysis showed the presence of potentially harmful lead, arsenic, and cadmium in both indoor and outdoor locations. High levels of lead and cadmium were associated with an older home built in the early 1900's.

Stable Isotope Assessment of Aquatic Communities in Eastern Washington Lakes, with Impacts on Rainbow Trout
Kevin Mahoney, Graduate
Dr. Ross Black, Biology

Rainbow trout (Oncorhynchus mykiss) is a sought after sport fish and is therefore stocked annually in many lakes across eastern Washington. However, little is known about how the lakes’ animal constituency impact rainbow trout ecology. Stable isotope analysis is a technique used to determine the organization of aquatic communities. This project will examine the stable isotope signatures of rainbow trout and their respective prey/food and competitor species. More specifically, analysis of stable isotope signatures will establish each sampled species’ use of different energy sources and feeding location in the lake (open-water vs. near shore), what trophic position they occupy, and whether this community structure changes in different age classes of fish species. Twenty eastern Washington lakes, all of which are managed for trout fishing and are stocked annually with rainbow trout, will be established as research sites. This study will provide a unique opportunity to collect stable isotope data from each of the lakes. Ultimately, such knowledge may be used by Washington Department of Fish and Wildlife to permit targeted management of individual lakes and thereby improve sport fishing of this important resource.

Does Childhood Neglect Predict Antisocial Personality Disorder?
Nicole Markealli, Shanna Ferrell, Ursula Heflick, Undergraduates
Dr. Kayleen Islam-Zwart, Psychology

According to DHHS, 557,380 children were neglected in the US in 2005 (2007). Childhood neglect has been linked to several psychiatric disorders and problem behaviors in adolescents and adults (Horwitz, Wisdom, McLaughlin, & White, 2001), and a history of physical abuse has been shown to correlate with the development of antisocial personality disorder (ASPD) (Jaffee, Caspi, Moffitt, & Taylor, 2004). We hypothesized that individuals with a history of neglect would have a higher rate of ASPD than those with no history of neglect. Furthermore, we predicted that males would be more likely to display antisocial tendencies than females. This study utilized archival data collected as a part of the National Comorbidity Survey (Kessler, 2000). Results supported both hypotheses. A history of neglect and being male both predicted a diagnosis of ASPD in comparison to no neglect and being female. By establishing a relationship between childhood neglect and ASPD, treatment and screening of those individuals at risk could facilitate early intervention.
Injury incidence has been reported to be high in artistic gymnasts, however the majority of these data have been obtained on elite or very-high level competitors. The bulk of participants in the sport however are non-elite or recreationally competitive athletes. The aim of this study was to analyze one-year injury history in non-elite female gymnasts. Competitive gymnasts (N=122, age 13.0 ± 2.3 yrs, mass 42.8 ± 10.9 kg) completed a survey with parental assistance regarding age at menarche, training history, number and nature of injuries within the previous year. Anthropometric measurements were taken by ISAK certified investigators. Data collected from this study show conflicting results with previous published research. Further results will be presented and discussed in relation to injury occurrence and different variables that may have influenced the data.

**Further Development of a Novel Buffer for PCR**

**Amanda Matthiessen, Graduate**

**Dr. Charles Herr, Biology**

Polymerase Chain Reaction is a powerful molecular technique used for forensic science, disease detection, as well as other important applications. PCR replicates specific DNA from a complex mixture of DNA. A problem currently exists with the technology. Typically, PCR generates more than the desired target DNA sequences. One problem sequence generated is called primer-dimer. Other unwanted sequences are generated when primers interact with non-target DNA. This noise degrades assay reliability. We have developed a novel PCR buffer system that reduces pH fluctuations during PCR thermocycling. One benefit of the buffer, containing 5-5, diethylbarbituric acid (BART buffer), is that it almost eliminates this noise, and increases the replication of the desired sequences. This has been observed in two substantially different PCR systems. One allows bovine sexing, (annealing temperature is 65Â°C), and the other, bird sexing (annealing temperature is 48Â°C and uses degenerate primers). This study will address a remaining problem with BART: frozen storage. Also, the development of a complete reaction mix for use in either bovine sexing or bird sexing will be attempted. Thaw; simply add cells, and the reaction will be ready to run.

**Issues that Influence the Feasibility of Technology-based Exercise Education and Monitoring in Patients with Cardiovascular Disease**

**Tarah McAllister, Graduate**

**Dr. Tanya Lapier, Physical Therapy**

Purpose: The purpose of this study was to describe how often patients with cardiovascular disease had access to home technology and health monitoring equipment. Methods: This study included 50 patients who were admitted to the hospital for a cardiovascular disease related diagnosis. Exclusion criteria included patients who could not understand English, were not cognitively intact, or had undergone cardiac transplantation or a ventricular assist device placement. Patients completed a questionnaire regarding home technology and health monitoring equipment available to them. Results: The type of technology most available was a video-cassette recorder (93%) and least available was the internet (58%). The health monitoring equipment most often available was a thermometer (90%) and least available was a blood pressure monitoring device (59%). Conclusions: We found in this population of patients that less than half could easily participate in an internet-based education and/or monitoring program after discharge, and many study participants were unable to independently monitor vital signs.
“Isolation”  
Lisa McCarthy, Graduate  
Nancy Hathaway, Art

My hope is to give the viewer another perspective on addiction. I am looking for the answers and the feelings of the addict afflicted with a disease that kills and takes their soul.

The Effects of Gender and Age on Dependent Behaviors and Traits  
Kelly Mickelson, James Fisk, Ali Palmer, Tom O'Neill, Undergraduates  
Dr. Kayleen Islam-Zwart, Psychology

Social and professional interactions can suffer when dependent personality characteristics exist. Past research suggests that age and gender may impact development of such features. The study utilized archival data collected from 5, 542 individuals as part of the National Comorbidity Survey (Kessler, 2000). Dependency was measured using two scales including behaviors (e.g. leadership roles) and traits (e.g. self-confidence). Results from a Multivariate Analysis of Variance (MANOVA) revealed age had a significant main effect for dependent behaviors when comparing the child/adolescent group to young and middle adulthood groups. Additionally, a significant main effect was found for dependent traits between the child/adolescent and young adult groups. For dependent behaviors and dependent traits, males rated significantly higher than female participants. Further research and expansion on this topic is warranted to explore dependency features that are subject to age and gender differences.

Diet, Age, and Growth of Tiger Trout (Salmo trutta x Salvelinus fontinalis) from Ten Eastern Washington Lakes.  
Andy Miller Graduate  
Dr. Allan T. Scholz, Biology

Tiger trout are a sterile hybrid between a male brown trout and a female brook trout. These fish are currently being stocked into eastern Washington lakes, even though their diet and interactions within the lakes are unknown. The purpose of this investigation was to determine the feeding habits of tiger trout in ten eastern Washington lakes. Study lakes ranged from small desert lakes, to large alpine lakes. There were two main objectives for this investigation: (1) determine if tiger trout feeding habits were uniform between these lakes, or if there were regional differences; and (2) to determine the age and growth of tiger trout in these lakes. Tiger trout were collected by angling, creel surveys, electrofishing, and gill nets. After their stomachs were pumped via gastric lavage, they were released back into the lake. Tiger trout were generalist feeders, preying upon the most abundant prey in their environment. Prey organisms included zooplankton, midges, mollusks, and small forage fish. Those over 300 mm in total length changed their diet and became piscivorous.

Untitled  
Austin Miller Undergraduate  
Shelly Murney, Art

No abstract submitted
Illegal Abortion: The Persistence of a Failed Policy in Western Europe
Lauren Miller, Undergraduate
Dr. Kristin Edquist, Government

Abortion was illegal throughout Western Europe until well into the twentieth century. Laws criminalizing abortion were perpetuated despite the fact that they proved ineffective at preventing it and were plagued with enforcement problems. I explore the political reasons for this longstanding prohibition during the nineteenth and early twentieth century in Britain, France and Sweden. Comparing these cases from a number of theoretical perspectives yields some useful explanations of these prohibitions, while also shedding light on some less useful ones. I find that the relative political influence of medical professional organizations and midwives, the common gender narratives employed by policy makers, and the political strategies of organized birth control movements likely contributed to the perpetuation of these policies, while the protection of fetal or maternal life, advancement in medical technology, or fears of demographic decline appear less influential.

2º Atrioventricular Block in Varsity Collegiate Athlete
Brett Moore, Undergraduate
Jeffery Kawaguchi, Physical Education

The human heart contains its own electrical system. This system is able to keep the heart beating without any input or stimulus form the brain. This system also has the ability to adapt the hearts rate to compensate for a change in activity level. Sometimes there is a change in the hearts electrical system that causes it to behave irregularly, also know as an arrhythmia. An arrhythmia may be benign, meaning it poses no threat, or catastrophic, meaning there is an immediate possibility of death. Often the arrhythmia goes unnoticed, but because of the increased physical demands placed on an athlete, they are more likely to notice the irregularity. In collegiate sports it is becoming more common for athletes to have arrhythmias and still be cleared by physicians to play in the varsity level. My case study is about one of these individuals.

Healthcare- A Right or a Privilege: A Comparison of Countries
Sarah Morris, Graduate
Dr. Mary Ann Keogh Hoss, Business Administration

This paper discusses whether healthcare in America should be a right or a privilege. By using other countries as examples, the author illustrates various ways universal healthcare coverage is working in foreign countries and is provided as a right to all citizens. Other examples within the US such as the Medicare system and state funded programs show how universal coverage has been beneficial to US citizens and confirm that their response to universal healthcare has been positive.
Untitled
Nicole Moya, Undergraduate

My name is Nicole Moya and I'm majoring in Studio Art in Photography at Eastern Washington University. As a child I was always very interested in photographs and the history behind the captured moment. It wasn't a passion though until a little over 2 years ago. I took just one basic photography class and right from then, I was completely hooked.

I see myself as very new to this form of art and I don't believe I've developed into the level of artist I know I have within me. I haven't found that passion, that obsession yet. Currently, I do have a deep interest in photographing landscapes and mainly old and run down things. Natural aging and what used to be is highly interesting to me. I also have an unexplored, as of yet, interest in expressing faith. The idea of how it's viewed to society, the good and the bad and also the feelings that get invoked from faith or lack there of.

Art is my life and I'm very much looking forward to finding my passion and experimenting with many things to discover myself.

Rockshelter and Cave Archaeology of the Columbia Plateau
Kimberly Mumaw, Graduate
Dr. Jerry R. Galm, Department of Anthropology

A synopsis of rockshelter and cave archaeology in eastern Washington is presented. Most of these natural features were formed by Glacial Lake Missoula outburst floods. Their distribution conforms to Channeled Scabland tracts and flood-incised valleys located across the Columbia Plateau. Human use of natural shelters spans at least the last 10.6 ka years and includes evidence of multiple forms of usage ranging from residential occupations to storage facilities. Data derived from a sample of nine excavated rockshelters and caves distributed across this the region are summarized, as is a synthesis of human use during the Holocene.

Women's Health Issues ~ A CD-Based Course Demonstrating Distance Education Pedagogy
N. Sue Murphy, Graduate
Dr. Jim Uhlenkott, Department of Education

Distance education dates to the beginning of the written word. More formally, distance education has been delivered by correspondence, radio, television, and other unilateral media. Computer capabilities propelled distance learning to the forefront of the educational scene. Course management systems (CMS), like Blackboard, have enabled faculty to play a greater role in distance education. Despite widespread use of CMS, developing effective distance courses requires incorporation of pedagogical principles rooted in distance learning.

Since 2000, I have developed entirely online and blended (face-to-face and online) courses utilizing various CMS. I wanted more control over course delivery so I could incorporate pedagogical elements critical for effective distance education. My dream has come to life via Women's Health Issues -- a CD-based course. While losing some interactivity afforded by CMS, this course provides students with different approaches that allow them to utilize preferred learning styles. Specifically, audio and video clips have been incorporated throughout the course; students can pick-and-choose or progress sequentially through the units and learning activities are included on many topics for students wanting to delve deeper.
In the "Pardoner's Tale," Chaucer describes the exciting shift in attitude that occurred in the Middle Ages. As England clawed its way out of the darkness and plague of the Middle Ages and approached the dazzling light of the Reformation it was also leaving behind the idea that death was a restful natural process.

The Relationship between Alcohol Consumption and Attempted Suicide.
Shadi Nimiri, Darci Sheridan, Michelle Kolassa, Undergraduates
Dr. Kayleen Islam-Zwart, Psychology

This study sought to determine the association of alcohol consumption (drinks per drinking day) with suicide behavior and age first attempted suicide. In this study, archival data were utilized as part of the National Comorbidity Survey (Kessler, 2000). A household sample of 8,095 (male 3,832 and female 4,263) responded to the survey. Subjects were 15 to 54 years of age. Results of an ANOVA indicated a significant difference between groups as a result of alcohol consumption for age first attempted suicide and number of attempts. Respondents who consumed higher amounts of alcohol portrayed more suicidal behavior and attempted suicide at a younger age. These findings show the important role that substance use plays in suicidal behavior.

Landscape as Character: The Mythic Land
Kathryn Nuernberger, Graduate
Dr. Jonathan Johnson, Creative Writing

We live in an era where most Americans experience Nature as a museum. We watch it on the Discovery channel or take summer trips to National Parks. For city dwellers, interactions with plants and animals often takes the form of exterminating those species we have been told could survive an Apocalypse. This presentation will focus on the challenge of writing authentically about daily experiences with a land in distress. Poems by Mark Strand and Ted Hughes provide exciting examples of how the voice of even this landscape can be heard through memory, folklore, rumor, and legend.

Overcoming Student Isolation for Successful Language Learning
Mana Okabe, Graduate
Dr. LaVona Reeves, TESL

Three main points in the presentation include the definition of anomie, how it affects English learning, and what teachers can do to provide a comfortable environment for international students to learn English efficiently. When people attend school far from their home country, they usually feel loneliness. They learn about the new culture, but they still do not feel that they fit into the new society. They have feelings of isolation, otherwise known as anomie. When language learners try to adjust to the new culture, they easily lose their confidence and tend to have negative attitudes toward learning English. Teachers want students to have positive attitudes, so they can learn English faster. Students need to be aware of their feelings of anomie. When the feelings of anomie decrease, they can acquire language faster. Learning the new culture and having communication with people from the new culture helps learners adapt to the new environment. This presentation will answer the following questions for teachers working with English as a Second Language students: How can a teacher lessen their feeling of anomie, and how can teachers foster positive student attitudes for successful English learning?
Developing Academic Biliteracy in Francophone Canada
Kristopher Olsen, Graduate
Dr. LaVona Reeves, English

For this paper, my research interest lies in the subjects of additive and subtractive bilingualism, appropriation and biliteracy as they apply to the acquisition of English as a second language by French Canadian learners. This topic interests me because it marries attitudes about one's own ethnic identity and second language acquisition. I have always gravitated toward linguistic studies with a sociological bent, and the idea of examining how a language learner views his or her own ethnic identity in relation to the target language resonates with me. What is the difference between acquiring a second language in an academic setting and appropriation of a language because it is dominant? Must the language learner's motives be taken into account before we can make this distinction? The situation of French language policy in Canada is interesting in that its speakers are in the minority in that country despite militant efforts in Quebec to hold its Anglo-Saxon neighbors' influence at a safe distance. I then compare and contrast this phenomenon with my own experiences as an ESL instructor in France, where French has status as sole official language.

Local Contemporary Poetry
Brett Ortler, Jeremy Halinen Graduates
Dr. Jonathan Johnson, Creative Writing

The popular conception of poetry almost inevitably includes flowers or love poems. Nevertheless, most contemporary poetry has long since abandoned the constraints of the Hallmark card, and poets today write about all varieties of subjects and emotions. As members of EWU's Creative Writing program, we presumptuously consider ourselves contemporary poets. We write odd poems. Silly poems. Poems about Safeway parking lots and fistfights. The Easter Bunny. Poems about sex. As such, we'd like to debunk some of the myths surrounding poetry through a reading and a brief discussion.

Ungulate Survey on the Colville Indian Reservation
Corey Peone, Undergraduate
Dr. Allan T. Scholz, Biology

The objective of this project was to estimate the populations of the following species of ungulates on the Colville Indian Reservation: mule deer (Odocoileus hemionus), whitetail deer (Odocoileus virginianus), Elk (Cervus canadensis), and Moose (Alces Alces). A helicopter with a pilot and two observers was used to make the counts. Animals on randomly selected management units were counted. These numbers were expanded using a computer model called "Aerial survey," created by the Idaho Department of Fish and Game to account for animals that were present in the management area but not seen by the observers. The model also calculated 90% confidence intervals for the estimates. Helicopter counts were 2,693 mule deer, 1,936 white-tailed deer, 68 moose, and 555 elk. These data were inputted into the aerial survey model, which gave estimated numbers for the both species of deer combined at 11,066 with a 90% confidence interval + 1,800, elk at 1,115 with a 90% confidence interval + 383. Moose were not put into the model. This work was conducted during the Winter break of 2006-2007 as part of an internship with the Colville Confederated Tribes Fish and Wildlife Department.
Maternal Bonding Predicted by Risk and Resilience Factors

Melodi Pflueger, Undergraduate
Dr. Kayleen Islam-Zwart, Psychology

Following a review of literature pertaining to attachment, and while on a nine week undergraduate research assignment to examine the "MRI of infants exposed prenatally to drugs of abuse" study (NIDA R01DA017820) in New York City, I investigated the efficacy of designing a tool to predict maternal bonding and infant attachment outcomes in a high risk population. Items from a battery of prenatal measures used in the ongoing MRI study were carefully chosen for their ability to indicate risk and resilience toward maternal bonding. Items from postnatal measures were selected to indicate the level of healthy maternal bonding and infant attachment. Two different methods for potential prediction of level of bonding emerged from this effort, and are presented as future possibilities for a scale that can be tested to predict and effectively target intervention programs for pregnant women at risk for problems in bonding with their infants.

Is Health Care a Right or a Privilege?

Joseph Plunkett, Graduates
Dr. Mary Ann Keogh Hoss, Business Administration

Americans like to believe that they have the best of everything. This is also the case with our health care system. However, most indicators illustrate that this is not the case. While the United States does have the highest health care per capita cost in the world, these expenditures are not followed with the best outcomes. The current tiered health care system leaves many either underinsured or uninsured. This high cost is due to the American health care system's payer-influenced mode of how and when treatments are administered. Costly interventions are emphasized, which are also much more handsomely reimbursed by payers. The safety net for the uninsured has become hospital Emergency Departments (EDs), many which have become overwhelmed with the large number of patients who have nowhere else to go for their primary care. Education can be effective in changing high-risk behaviors which may result in long-term health issues, such as smoking. The vast number of underinsured and uninsured in America will benefit from a government-run, single-payer health care system, and many would agree that it is time to change our current one.

Bonnie Prince Charlie and the 1745 Uprising

Gwen Pollock Undergraduate
Dr. Martin Seedorf, History

My paper is about the 1745 Uprising in Scotland that involved the Jacobite supporters for the Stuarts against the British. The 1745 Uprising was the last aggressive attempt that was made by the Stuarts to reclaim the throne of England. Bonnie Prince Charlie was the rallying point for the Jacobites, but after several victories, the Jacobites will fail, the clans will fall, the Bonny Prince will flee Scotland, and the Stuarts will never achieve their goal of restoring the throne to their family.
Multiple Intelligence
Alice Potapenko, Undergraduate
Dr. Jeffrey Stafford, Communication Studies

My primary focus for this presentation will be based on the theory of Multiple Intelligence (MI), fashioned by Howard Gardner, a professor of education and cognition at the Harvard Graduate School of Education. I will explore Gardner's eight intelligences in order to examine the different learning approaches and how they impact children as well as educators in our schools. According to Gardner, Multiple Intelligence suggests that the traditional notion of interest based on I.Q. testing, is far too limited. He states that our schools and culture focus mostly on linguistic and logical-math interests, which limits the ability to explore other intelligences.

The Romantic Opera
Laura Proulx, Undergraduate
Dr. Christina Valeo, English

Romantic era was a time of intuitive renewal; all areas of the arts experienced similar changes in style, meaning and purpose. Similarly, the Romantic Opera developed into an expressive art form containing themes of light and dark, gothic and the supernatural. These aspects reflected in different Romantic operas revolutionized how mankind reacts to his surroundings to this day.

Dialects within Japan: Style-shift or Code-switch?
Alex Queen, Graduate
Dr. LaVona Reeves, English

Japanese is a context-heavy, low-content language, and this level of contextualization may contribute to the mutual unintelligibility between basilectic forms of certain dialects and "standard" Japanese (hyoujungo). Through mass media and the standardized language of education and the government, a notion of "standard" Japanese has spread throughout Japan, creating pockets of pidginized Japanese. The transition from certain dialects of Japanese to "standard" Japanese may be simply a style shift; there is also a chance that it may be a code switch. I will undertake analysis of three major Japanese dialects including Hyoujungo, Kansai-ben, and Tsugaru-ben. For the sake of manageability, analytical methods will be based on accent and utterance ending particles (bunmatsushi 〜“あたし〜”〜“あてる〜”〜“あた〜”〜“あたる〜”). These observations should shed more light on the divide between standard Japanese and even between dialects themselves.

The Relationship between Marital Satisfaction and Bipolar Disorder
Reyna Quiroz and Kimberly Tolley, Undergraduates
Dr. Kayleen Islam-Zwart, Psychology

The purpose of this study was to examine the relationship between bipolar disorder and satisfaction with marriage. In an effort to observe the affects of bipolar disorder on marital satisfaction, an ANOVA analysis was used utilizing archival data collected as part of the National Comorbidity Survey (Kessler, 2006). The NCS surveyed a stratified sample of 8,000 participants using a structured interview in the 1990's. The present study included 1177 males and 1386 females in a 2 (bipolar vs. non-bipolar) x 2 (male vs. female) in a between subjects design. The results indicated participants diagnosed with bipolar were significantly less satisfied with their marriages than controls. There was also an interaction between sex and bipolar, with women being more dissatisfied with their marriages than bipolar men. These findings suggest that people diagnosed with bipolar do have lower marital satisfaction and stress the importance of couple therapy as part of bipolar treatment.
Human Powered Paper Vehicle Competition Participation Experience
Laura Ramsey, Matt Hanes, Jonathan Grove, Undergraduates
Jason Durfee, Engineering

Eastern Washington University Department of Engineering has hosted the Human Powered Paper Vehicle Competition since 1997. This activity is where students work together to produce a functioning vehicle made from paper and paper products, with a limited supply of non-paper products. One of this year's teams, the Evil Geniuses, decided to go with a more aesthetic appeal and designed their paper vehicle to look like a motorcycle with a paper trailer to carry it. Additionally, the bike had many concepts from past years applied to it; one of the most crucial was cardboard pulp stuffing inside cardboard tubes with glue which machined into a functioning paper bearing. The bike had a few flaws in it causing, so the team did not place in the competition, but they learned teamwork and communication skills while managing to turn a few heads with their ingenuity.

Untitled
Todd Rattray, Graduate
Shelly Murney, Lanny DeVuono, Art

Although my interest in sculpture began with the human figure, inherent qualities of material and form took precedent over realistic representation. Today much of my work is based on found object assemblages that have evolved to incorporate aspects of our external present day society and timeless subjects such as desire and loss, filtered through my own internal views to create pieces that our both autobiographical and relate to the larger culture as a whole. This process begins with recognition of a particular quality of an object and how that may obliquely reflect a consuming issue at that moment. My work can be seen as deriving from Dadaist attitude with expressionistic qualities and, though largely visual, is strongly influenced by the aesthetics of poetry and music.

At this point most of my possessions are eventually claimed by this art making process, regardless of their originally intended purpose or personal value. My work often consists of multiple objects recombined to create sculptural installations. Lately I have been exploring these concepts through the medium of charcoal.

British and American Perceptions Regarding Mussolini's Assumption of Power and His First Years in Office
Shaun Reeser, Undergraduate
Dr. Ann Le Bar, History

Although Benito Mussolini was the "first fascist," most students of "generic fascism" today see him only in the shadow of Adolf Hitler. It was therefore surprising when my initial research on Mussolini uncovered many contemporary English language books and articles that presented him favorably, often as the savior of Italy. In the fifteen years from the end of World War I until the eve of the invasion of Abyssinia, Mussolini went from unknown, to beloved, to an enemy in the eyes of British and American observers. It was only when he became openly aggressive in the mid 1930s that many Westerners finally questioned the man once seen as bringing order out of chaos. Mussolini was particularly admired by American legal scholars and political scientists due to his anti-communist position, his oath of loyalty to the Italian king, and his efforts to eliminate inefficiency in the Italian government.
Playing with Formal Impulse in Contemporary Free Verse
Shira Richman, Jessica Moll, Graduate
Dr. Jonathan Johnson, Creative Writing

In the 21st century most poets work in open form, also known as free verse. Recent explorations of form, however, reveal that a blending of technique often creates the most effective verse. In this panel, the poet will show how the impulse toward open form is often shaded by formal influences, focusing on her own work as the text.

“4 Matts”
Jessica Robinson Undergraduate
Shelley Murney, Lanny DeVouno, Art

I feel most like myself when I am behind my camera or lying on my floor looking over a canvas with brushes and paint tubes scattered around me. I am a senior in the Studio Art program. Most of my work consists of either digital photography that includes the figure or intuitive paintings. Lately I have been combining both mediums, for example I like to use acrylic paints on black and white prints. In this piece I painted on a photo montage created in the darkroom. I have enjoyed exploring this process. The layers of photography and paint come to very interesting end results.

Narcissism Among Corrections Officers
Wendy Rosenau, Undergraduate
Dr. J. Anderson, Psychology

Narcissism is a personality construct that is of interest to social and applied researchers alike. We examined narcissism among corrections officers, hypothesizing that officers would have higher levels of narcissism than undergraduate students. As a secondary aim, the gender difference of narcissism in Correction Officers was also investigated. This was an archival study consisting of 52 corrections officers and 346 college students. All participants completed the Narcissistic Personality Inventory (NPI) as part of a larger questionnaire packet. As expected, Correction Officers (M = 27.92, SD = 5.75) scored significantly higher on the NPI than the students (M = 16.47, SD = 6.90). No gender differences for narcissism were found, however, in Correction Officers (Males: M = 27.45, SD = 5.63; Females: M = 29.50, SD = 6.08).

Do Teachers From Two Different Educational Approaches Differ in Their Assessment of Home Schooling Children’s Social Skills Development?
Cheyne Rossbach, Undergraduate
Heather C. Robinson, Communications Studies

Exposure to the Alternative school format gives public school teachers better understanding concerning the nature of homeschooling families and assists in dispelling some elements of the social skills stereotype. Their answers tended to be slightly more in-depth, and presented positive elements that they observed of the home school environment. One survey from the Mainstream Elementary School showed a very strong opinion of the social skills stereotype this survey addresses, and supported the research idea. Further study ultimately needs to take place as this survey encompasses far too small a body of individuals to make it truly representative of averaged teachers opinions, but it does give a good general demonstration of varying positions on the issue.
¿Loca? Un retrato nuevo de Juana I de Castilla
Crazy? Re-evaluating Juana de Castilla

Rachel Rushing, Undergraduate
Dr. Guillermina Walas, Modern Languages and Literatures

Juana de Castilla, the sixteenth century queen of Spain, was deemed "mad" by those who lived in her era and since her death she has continually been portrayed in this manner; until recently. Due to our advancements in research, questions have been raised by those who feel that Juana was labeled incorrectly. Author Gioconda Belli, for example, dedicated her novel El Pergamino de la Seduccion to portray Juana as a misunderstood woman, falsely labeled by those who did not want her to rule. In contrast, we still rely on images such as Francisco Pradilla's paintings to judge her. His nineteenth century historical paintings of Juana portrayed the "mad" queen accompanying her husband's coffin to Granada, and also as a gaunt, hollow woman who sits in her tower prison cell, surrounded by several artifacts that link her to "madness."
No one can ever be sure about the validity of these accusations because our standards and beliefs on the idea of "madness" have changed since the 1500s, but by reviewing these portrayals we at least begin to change our opinions of Juana de Castilla and other historical figures.

Lyrical Dissent
Jaque Ryder, Undergraduate
Tom Askman, Art

Most language is identifiable by words in which letters are formed to create types stories. I find that when the words are taken away we are left with gestures we make which than create a unique identity for every person. Each mark is complete from a feeling that drew it where it is a conscious choice or not. I work in a medium that lets me formally create poetic gestures in an abstract sense or feel These ceramic pieces and the process of multiples and gesture is a very meditative state and a way to explore myself and grow. The idea of growth of these pieces really mimic my own growth as they are resurrected. My tie to each piece is very personal, I view each piece as a part of me and know that a thought has passed in my mind through the motion of the process; this is why no two pieces are alike. That moment in time when in the process can never be found again nothing is twice, I just bring that history into a reality with the presence of my installations.

Untitled
AnnaMarie Schaefer, Undergraduate
Shelly Murney, Art

No abstract submitted
The Intuitive Creative Process
Anna Schroeder Undergraduate
Dr Middleton, Music

A composer's creative process is as unique and personal as the music they create. However, the standard procedure for analyzing a piece of music contains rules that channel the music into a certain idiom: the language of tonality and functional harmony. As a composer, I know that my creative process leads me to write music that does not fit into this language. Each time I compose there is a conflict between my intuition and the theoretical knowledge I possess. In this project, I will analyze my own and other composers' music and discuss the differences that might exist between intuitive composition and proper musical theories. I will also discuss alternate analytical techniques and how a composer might come to understand their creative strategies by applying these techniques to their music.

Effects of Narcissism and Teammate Relationship Status on Public Versus Private Attributions of a Collaborative Team Success
Kendra Selle, Graduate
Dr. Amani El-Alayli, Psychology

The present investigation was designed to study the effects of narcissism and teammate relationship status on public versus private attributions of a collaborative team success. Considering previous literature on attributions and narcissism, the following hypotheses were formed and tested on a sample of college students (n = 169): 1) Narcissists would be more self-serving than non-narcissists overall after experiencing a collaborative team success, and 2) This discrepancy would be most noticeable when an opportunity for public recognition exists, and 3) Unlike non-narcissists, there would be no significant differences how self-serving narcissists are in their attributions to team success in relation to whether or not their partner is a friend or stranger. Participants completed a measure of narcissism and read a reality television vignette in which they were to imagine experiencing a team success. They then indicated how much they and their partner were each responsible for the team success. Their relationship status (friend or stranger) with their partner and the type of recognition (public or private) they could receive were manipulated. Results for hypotheses 1 and 2 were consistent with predictions; however hypothesis 3 was not supported, with narcissists showing a stronger tendency to make self-serving attributions when paired with strangers than with friends, especially when the opportunity for public recognition was available.
The Effects of Cognitive Load and Emotional Intelligence on Malingering Performance
Leandra Shaver, Jolene M. Oss, Tina Myers, Undergraduates
Corey McNally, Graduate
Dr. Kayleen Islam-Zwart, Psychology

Malingering is defined by the American Psychiatric Association in the DSM-IV as "the intentional production of false or grossly exaggerated physical or psychological symptoms motivated by external incentives" (2000, p. 739). Research shows that some people will mangle, fake, or exaggerate a mental illness in order to achieve personal gain. The demand of an individual's mental resources to complete a task is cognitive load (Pillay, 1997). Emotional intelligence involves empathy and the ability to handle social encounters. This research study examined the detection of malingering based on different levels of emotional intelligence as well as high and low cognitive loads. It was hypothesized that individuals with high emotional intelligence and low cognitive load would be less detectable when malingering, compared to individuals with low emotional intelligence and high cognitive load. The study involved 131 participants from EWU filling out questionnaires including Inventory of Malingered Pathology Measure, Inventory of Malingered Symptomatology, and an Emotional IQ Test. Results and discussion will be presented.

Efficacy of Digital Video in the Measurement of Lower Extremity Position During a Step-Down Test
Michael Shelton, Undergraduate
Dr. Ryan Mizner, Physical Therapy

Female athletes are more likely to experience knee injuries compared to male athletes. "Knock-kneed" leg postures are a contributing factor to knee injury risk. An affordable and easy-to-use method of assessing leg posture would be a valuable clinical tool. This study compared the reliability and validity of measuring knee posture in 35 athletes during a step down task using a digital camcorder compared to high-cost multi-camera laboratory equipment. Photos were isolated from the camcorder (front view) while the athletes were in peak knee flexion. The amount of knock-kneed position from the digital photo was compared to three-dimensional hip, knee and ankle angles. The camcorder knee angle measurement had excellent intra-tester reliability (ICC=0.96). The 3-D lab cameras revealed that the knock-kneed camcorder picture is actually a visual illusion caused by cork-screwing at the hip and ankle. A digital camcorder can provide reliable leg posture assessments that correspond to the joint positions obtained from the expensive laboratory system. Efforts to improve potentially risky knock-kneed postures should include intervention to minimize associated hip and ankle joint collapse.
Boethius, Chaucer, and "The Wheel of Fortune Blues"

Richard Shute, Graduate  
Dr. Logan Greene, Literature

Ralph Ellison wrote, "The blues is an impulse to keep painful details and episodes of brutal experience alive in one's aching consciousness . . . to transcend it, not by the consolation of philosophy but by squeezing from it a near-tragic, near comic lyricism." Ellison's comment brings to mind The Consolation of Philosophy, by the Roman statesman and philosopher Boethius. In his classic work, Boethius presents his own internal struggle with misfortune by creating a dialogue between a prisoner and an ethereal female personification called Lady Philosophy. Philosophy's argument convinces the prisoner that the highest happiness lies beyond any fame, wealth, and power brought by life's Wheel of Fortune. Geoffrey Chaucer incorporated themes from The Consolation extensively into his long poem, Troilus and Criseyde. Even though Boethius asserts "philosophy" in his title, I will explore the idea that philosophical reason is only part of a rhetorical strategy which uses "lyrics and music" to transcend the blues that Fortune's wheel also brings. Boethius and Chaucer offer timeless poetic reminders about the transience of all "earthly goods" and that happiness is attained through acceptance of events and commitment to higher values.

The Intersection of Disease and Poverty in Slum Communities Around Nairobi, Kenya

Keirsten Snover, Graduate  
Dr. Jerry R. Galm, History/Anthropology

Studies in Critical Medical Anthropology typically include an examination of the relationship between poverty and infectious disease in modern epidemiological analyses. This study employs ethnographic methods to examine the interconnectedness of poverty and disease in slum communities around Nairobi, Kenya. Connections are made between the impoverished living conditions and four major diseases of concern in these areas. Living conditions in these communities increase potentials for the transmission and spread of infectious diseases while also limiting proactive treatments and responses to epidemics. This form of structural violence is central to the expanding discussion of disease transmission and treatments in the developing world.

Structural and Magnetic Properties of Bifluoride Containing Polymers

Heather Southerland, Undergraduate  
Dr. Janie Manson, Chemistry

The properties of the 3-D polymeric system [Cu(pyz)2(HF2)](BF4) (pyz=pyrazine) have been well characterized. By replacing the tetrahedral BF4- anion in the lattice with an octahedral anion such as SbF6-, many properties of the system are changed. Both the structural and the magnetic properties between the two systems vary from one another though the magnetic exchange pathway remains along the 2-D Cu-pyz lattice. In an attempt to isolate bifluoride (HF2-) as a magnetic exchange pathway, a 1-D chain with linking bifluoride ligands has been synthesized [Cu(HF2)(py)4](BF4)(py) (py=pyridine). This 1-D chain shows similarities between other single chain magnets.
Can Muscular Strength Within the Kinetic Chain Predict Athletes' Improvement in Performance with Landing Training?

Sasha Speer, Graduate  
Dr. Ryan Mizner, Physical Therapy

Landing movement patterns in cutting sports are predictors for ACL injury risk in female athletes. Technical instruction has been shown to improve potentially dangerous landing strategies leading to ACL injury, but no studies have investigated the factors that may predict the athlete's ability to change their landing technique. Perhaps muscle strengthening may be needed prior to instruction to improve training results? The purpose of this study was to examine the relationship between muscular strength and the ability to correct dangerous landing patterns. Thirty-seven female athletes underwent isometric strength tests of the leg muscles and timed trunk muscle strength tests. Strength testing was followed by 3-dimensional movement analysis of a drop and hop task from a 31cm box. Subjects were then given verbal instruction to improve their landing technique and were then retested. The athletes were able to significantly improve their landing technique regardless of their initial strength. Establishing good baseline strength is probably not a prerequisite for making training improvements.

The Effects of False Memory. Do We Accurately Recall Conscious or Automatic Memories Better When Presented in an Auditory or Visual Fashion?

Kim Stankovich Katy Wareham, Britney Graham, , Undergraduates  
Dr. Leonard Stern, Psychology

The Effects of False Memory. Do we accurately recall conscious or automatic memories better when presented in an auditory or visual fashion?  
Much recent research has supported the idea that human memories can be vague and, at times, even false. In a widely used procedure for inducing false memory, presentation of a list of words semantically associated with a non-presented critical word results in false recognition of the critical word.  
A previous study by Stern and Kalal (2007) used a procedure known as the Guided Processes Disassociation Procedure to separate conscious and automatic memories of falsely remembered words from visually presented lists. They found that false recognition was reflected more in conscious than in automatic memory. The present study determined whether an auditory presentation of words would produce similar results.  
In our study, the auditory presentation of words produced significant false memory. As with visually presented words, the conscious component of falsely remembered words was higher than that of non-presented control words. However, the automatic component of the falsely remembered non-presented words was lower than that of non-presented control words. This surprising result may provide a way to differentiate true and false memories.
Untitled
Dennis Sullivan, Undergraduate
Shelly Murney, Art

I am a Junior at Eastern Washington University. I have been attending the University since 2003. Photography has been part of my life since I was high school. I work in a traditional dark room and have black and white prints. I have always wanted to create art that people can look at and be inspired. My photography subjects vary. I have worked with models and landscapes. I have tried to tell a story through my work. My work shows a variety of subject and shows different stories of them having different feelings to them. The moods go from sad to happy and many others types of emotion. People have always interested me and will do many more work with people and who they are through photography.

Differences in Growth Rates with Math for Students Receiving Services in an Elementary School
Jill Sullivan Graduate
Alma Vega, Erica Delgado, Mandy Ray
Dr. Susan Ruby, PSYC/CEDP

Schools have provided specialized services through Title One and Special Education for students performing below standards. Educators often assume that programs will provide the roadmap for students to catch up, but progress may not be well understood. The current study investigates differences in growth rates for math with students in grades 2-5 at a Northwest elementary school. Scores in screening measures at three time periods will also be examined in relation to scores in High Stakes Testing. Implications for use of schoolwide data for instructional planning will be discussed.

Untitled
Amanda Swan, Undergraduate
Tom Askman

No abstract submitted

Untitled
Yelena Syvaya, Undergraduate
Shelly Murney, Art

My name is Yelena Syvaya and art is my passion. I was born in Ukraine. From childhood I spend most of my time by drawing and painting. Right now I live here, in a new country and I learn new medias of art in here. I am in photography world right. Photography opened my eyes to new things around me, and I want to continue to work in photography field and in art. I will be not successive with my life with out it.
Heterosexism: Silence Kills
Paula Tarbert, Undergraduate
Heather Robinson, Communications

The obliteration of heterosexism is vital not only for our current society, but for the future as well. This subject came up in my gender and communication course during winter quarter 2007; I felt a strong connection to join the fight in equality for all. I believe that people need to realize that to respond towards fear, ignorance and uncertainty with hate is what is harming our society. Although one may not actively participate in the hate attacks, whether it be physical or verbal, to not say anything or do anything is just as detrimental. My son, age 12, and my daughters age 10 Â½, were outraged and moved to their own form of action just by watching me, their mother, formulate this video. This tells me that to speak up and out is the only way that we as a caring, educated and active society can make a change to stop the hatred and the fear that goes with the unknown.

Appraisals of Past and Future Selves as They Relate to the Current Self
James Taylor, Undergraduate
Dr. Amani El-Alayli, Psychology

Wilson and Ross (2001) showed that people will denigrate a past self in order to enhance their current self even when no change has occurred. In this study we replicated the findings of Wilson and Ross as well as examined how people would rate a possible future self in relation to their current self. We hypothesized that individuals would denigrate a past self and enhance their future self due to a desire to see themselves as improving. Participants included a class of undergraduate psychology students who completed a questionnaire as part of an in-class demonstration. The questionnaire asked them to rank themselves on five desirable and five undesirable characteristics. They rated themselves as they were five years ago, their current selves and how they saw themselves ten years in the future. The findings were consistent with the hypothesis that participants would see themselves as improving over time.

Endometriosis
Just Taylor, Undergraduate
Heather Robinson, Communications Studies

I chose to do my study on Endometriosis, for it is a disease that 90 million worldwide have, 10 million alone in the United States. This disease not only affects the personal lives of women, but it affects their jobs, families, careers, and schooling. The only way to determine if you have this disease is to have a to have a medical procedure known as a laparoscopy. This is a day in and out surgery; however, it is at this point and time the only way to detect this disease. This disease is not talked about. You may hear about a friend or family member that has it, but other than that it is a silent disease. The women I surveyed have all lost relationships, jobs, and family because of the enormous amounts of pain involved with this disease. Two of the women interviewed had to have complete hysterectomies due to this disease and the lack of health care. One of the women involved was only 21, and both had their chance of motherhood taken away.
Manufacturing a Stirling Engine
Arron Thompson, Undergraduate
Dr. Toby Rule, Engineering and Design

As part of senior capstone, our group decided to try manufacturing a Beta type Stirling engine in higher quantities with high quality. A prototype was built initially that did not function. Our design was looked over again and several mistakes had been made. Our second prototype was manufactured with much higher tolerances and ran beautifully. The next step was to make 24 with in the allotted time.

The Affects of Savoring the Moment on Future Life Satisfaction
Kimberly Tolley, Angela Harmon, Undergraduates
Dr. Philip Watkins, Psychology

The present study attempts to observe the relationship between one's ability to savor the moment and predicting subjective well-being in the future. The Satisfaction with Life Scale (SWL), and the Savoring Beliefs Inventory (SBI), was administered to psychology students in a pre-post test design. The SWL is an 18 item self-report inventory that measures participant's satisfaction in four domains using a Likert Scale. The SBI assesses one's ability to savor positive moments, reminisce about positive experiences, and anticipate future positive events. The results showed that when controlling for high satisfaction in life on the pre-test, savoring the moment proved to be a strong predictor of increased life-satisfaction in the future with a Pearson correlation of 0.64. An individual's ability to savor the moment appears to play an important role in increasing subjective well being.

Microcredit: A Solution to Poverty
Susan Tubb, Undergraduate
Heather Robinson, Communications

In 1977 the Grameen Bank of Bangladesh was founded as an answer to the staggering poverty that newly formed Bangladesh was facing as a result of conflicts due to its declaration as an autonomous state. The main purpose of this bank was the extension of small loans, mostly to women, as a means to start small businesses and eventually exit poverty. The banking system known as microcredit or Grameen credit has been used all over the world with success and failure. Duplication of the original Grameen bank microcredit concept has been met with both failure and success either because the original concept wasn't adhered to or adaptations of Grameen credit weren't successfully tailored to the new culture. Discussion will include examples of success stories as well as failures and ideas of how we may successfully apply microcredit to the world's impoverished to help alleviate poverty.
The "Looker-On": Lucy Snowe and Strategies of Narrative Self-Definition
Renee Turgeon, Undergraduate
Dr. Anthony Flinn, English

Through Lucy Snowe, the narrator of her last novel, *Villette*, Charlotte Bronte demonstrates how the narrator can use the narrative as a means of asserting her autonomous presence in the world. Unlike most narrators, Lucy uses diversion and obscurity as a means of revelation. Lucy's narrative is a carefully constructed interaction which creates a balance between allowing us to know and understand her while at the same time regulating the nature and extent of that knowledge. Although Lucy has been deemed by many critics as unreliable in her post as narrator, this assessment is arguably not the case. While it is true that she often withholds information from the reader, she does so according to a deliberate system and for a deliberate purpose. For this reason her acts of withholding, in addition to other narrative strategies she employs, are not qualities of unreliability but rather components of a carefully constructed system by which Lucy creates an identity while also asserting her ability to do so.

DNA from Bone and Feathers
Caitlin Valentin, Graduate
Dr. Charlie Herr, Biology

Our lab is developing methods for extracting DNA from bone and feathers. It is difficult to extract DNA from bone and feathers due to the small amounts present and the tight association of DNA to calcium phosphate in bone and/or keratin and collagen present in bone and feather. Increasing the yield of DNA would be valuable for the forensic, anthropologic, and archeologic fields. We have discovered that the use of an extraction buffer containing 600mM ethylene glycol tetraacetic acid (EGTA) will de-mineralize bone, and 2-Mercaptoethanol and heating in a microwave will dissolve the collagen fibers that are present. To separate the EGTA and 2-Mercaptoethanol from the DNA after use, we utilize a procedure we have termed electrophoretic dialysis. This procedure uses electrophoresis to drive ions out of a dialysis bag. In the extraction of DNA from feathers, we have discovered that a 50/50 mixture of EGTA and 2-Mercaptoethanol paired with heating in a microwave solubilizes the majority of the feather, potentially releasing DNA. The feathers also undergo a modified version of electrophoretic dialysis to separate the DNA from the chemicals in preparation for additional experiments.

Mary Jane: Not Such a Mellow Fellow
Cindy Vanos, Faithe Brown, J.R. Parker, Undergraduates
Dr. Kayleen Islam-Zwart, Psychology

Prior research suggests a correlation between the frequency of marijuana use and problem behaviors for both males and females (McCrystal, 2007). This study utilized archival data collected as part of the National Comorbidity survey (Kessler, 2000), of which 3,807 males and 4,245 females over the age of 15 were interviewed. Our objective was to determine how frequency of marijuana use and gender impacted the prevalence of problem behaviors. A 2(male vs. female) X 5(no use to daily use) ANOVA revealed that males and females significantly differed in frequency of marijuana use as well as problem behaviors. Specifically, males showed both a higher tendency to use marijuana and engage in problem behaviors compared to females. Results suggest that marijuana may be more harmful than commonly perceived. An emphasis on preventative strategies and the awareness of the potential harm associated with marijuana use is necessary.
Adjustment to Jail for Minority and Non-minority Individuals
Alma Vega, Undergraduate
Dr. Kayleen Islam-Zwart, Psychology

This study examined adjustment differences between minority and non-minority individuals in jail. It was hypothesized that minority individuals would adjust differently to jail than non-minority individuals. For this study, 106 inmates ages 18 and over completed a jail interview and the Prison Adjustment Questionnaire as part of a larger study. Findings revealed no difference in the adjustment patterns to jail between minority and non-minority individuals. One reason for this outcome could be attributed to the small sample size; individuals from the many groups might not have been adequately represented.

Antisocial Personality Disorder Effects on Negative Perceptions of Partners Behavior
Alma Vega, Jessica DeBoever, Kim Robinson, Undergraduates
Dr. Kayleen Islam Zwart, Psychology

According to a study by Kim and Capaldi (2004), women's antisocial behavior in an intimate partner relationship contributed to the level of her male partner's aggressive behavior. In contrast, males with antisocial personality disorder did not affect their female partner's negative behavior. We hypothesized that individuals with antisocial personality disorder who are in an intimate partner relationship would endorse more negative perceptions of their partner's behavior in contrast to people without antisocial personality disorder. This study utilized archival data as part of the National Comorbidity Survey (Kessler, 2000). We had a random sample of 4308 participants (80.9% Caucasian, 53.6% males). Results indicated that individuals with antisocial personality disorder have higher negative perceptions of their partner's behavior as compared with individuals without. There was no significant effect of gender on negative perceptions of partner's behavior.

Poetry Isn’t Funny
Zachary Vineyard, Undergraduate
Maya Zeller, English

Some contemporary American poets are bringing this question to the foreground: Why be serious? With readings from work by Thomas Lux, Billy Collins, Dean Young, and Kay Ryan, this panel will address why poems are generally thought to be serious instead of fall-out-of-your-chair funny. A brief exploration of humor in poetry will show us that poets are using humor to demonstrate meaning and understanding about our lives.
Both researchers and clinicians need an efficient and accurate way to measure the functional limits and disabilities of their patients. To determine whether the Late Life Function and Disability Instrument (LLFDI) produces valid results in patients with cardiovascular disease (CVD), we examined the relationship between the results of this tool and other valid questionnaire and performance tests on patients recruited from an outpatient Cardiac Rehabilitation Program. We used descriptive statistics and correlations to analyze 3 components of the LLFDI (P < 0.5). All LLFDI components were significantly correlated with 3 of the outcome measures. Individual components of the LLFDI were significantly correlated with at least 2 or more of the criterion measures. These results suggest that LLFDI has acceptable validity in patients with CVD and therefore would be a useful functional outcome measure.

My name is Boet Waldbjorn. I am a junior at EWU majoring in Theatre and Studio Art. I work in both photography and theatre design. A great deal my art has been influenced by comic books I read growing up. The heavy shadows and gritty style of the comic have carried over into my artwork. While most of my current works are a combination of digital and film photography focusing on creating images paying strong attention to the shadows and use of selective colors, I still tend to shoot a lot of spontaneous works, some of it being processed to have more shadows and stronger coloring then it did originally.

The Green revolution in India changed India from being a country of endemic food shortages to a country self-sufficient in food grains. The controversy about the introduction of the GMOs has further kept the debate alive. The proponents of biotechnology hold that the new genetically modified crops reduce both biotic and a-biotic stresses in agriculture. They claim that the GMOs can reduce the consumption of pesticides, increase yields, improve the ability of plants to resist droughts and enhance the nutritional quality of food. However, opponents to the use of GMOs argue that there are unknown risks that can be associated with the use of genetically modified foods and organisms. The controversy has been stirred by several NGOs who have vehemently opposed the introduction of GMOs. This paper seeks to assess the social and cultural implications of the controversy over GMOs in India. The politics that has emerged around the introduction of GMOs in India only serves to highlight the changed social significance of science and technology. How it affects the attitude of the farmers towards its use and how the issues of science, ethics and alternative methods addressed in this controversy is what this paper seeks to answer.
Maragaret Atwood and the Native American Holocaust
Brittany Walker, Undergraduate
Dr. Beth Torgerson, English

In exploring the dystopia of Margaret Atwood's The Handmaid's Tale and the tragedy of the Native American holocaust, it is apparent that the methods and processes of dehumanization are universal. Atwood provides her audience with an upsetting look into the future of America while at the same time is directly comparable to the horror of the country’s past. While Atwood's novel was written at a different point in American history, her work explores the unique ties that can be found between any social coup d'etat (violent uprising) that has devastating results.

Atwood represents her notions of how the social constructs of American life can possibly lead to drastic changes within the fabric of the social community of any country. Just as it was with the Native American holocaust and the later events that transpired in World War II (among others), Atwood seeks to discover what can lead a society to committing such atrocities. Her characters are repeatedly dehumanized and are controlled by fear tactics that are commonly used in dictatorship societies in order to maintain power.

Minority Role Models
Marcus Walker, Undergraduate
Heather C. Robinson, Communications

The DVD I am presenting called Minority Role Models, which was put together and edited by me, shows the problem with today's minority youth not having enough positive minority role models. Throughout the video there are video clips and pictures with the current negative role models for the minority youth. In these pictures and video clips it shows the gangs and violence through the mainstream media. Then the video shows pictures of minority kids and how the media directly influences them. Towards the end of the video there are clips of educated successful minority role models and how there needs to be a push towards more of these figures. The music that follows the video is a bit explicit but the lyrics send a powerful message, and they directly correlate with the video. The song that is used is called "Young Niggaz", by Tupac Shakur. Without this song the video would not be half of what it is, that is why I chose it.

I am passionate about sharing this video with others because not only is it a good video, but the message that this video has to offer should be shared to the world.

Differences in Growth Rates with Writing for Students Receiving Services in an Elementary School
Sara Webb, Graduate
Jared Ozaki, Ali Palmer, Sally Bell
Dr. Susan Ruby, PSYC/CEDP

Schools have provided specialized services through Title One and Special Education for students performing below standards. Educators often assume that programs will provide the roadmap for students to catch up, but progress may not be well understood. The current study investigates differences in growth rates for writing with students in grades 2-5 at a Northwest elementary school. Reliability issues with writing will be examined. Scores in screening measures at three time periods will also be examined in relation to scores in High Stakes Testing. Implications for use of schoolwide data for instructional planning will be discussed.
Patterns of Genetic Variation Among Geographic Subpopulations of the Meadow Vole

Lacie Westbrook, Undergraduate
Dr. James G. Hallett, Biology

Geographic barriers can influence patterns of genetic substructure by reducing migration. I asked how differences in the size of geographic barriers affected genetic variability in the meadow vole (Microtus pennsylvanicus). The Pend Oreille River, sloughs, and streams were predicted to have declining effects on genetic subdivision. DNA was extracted from 307 individuals collected from six habitat restoration areas along the Pend Oreille River. An additional 58 samples were obtained from two areas in Idaho as outgroups. Genetic variation was characterized using six microsatellite markers. Microsatellites are segments of DNA consisting of variable numbers of repeated sequences that are nonfunctional. Allele frequencies were used to calculate Nei’s genetic distance between all pairs of subpopulations. These distances were compared to geographic distances with a Mantel test. I will discuss the observed patterns of genetic substructure in relation to the additional habitat changes that will result from habitat restoration.

Factors Influencing Participation in Exercise and Feelings About Health and Quality of Life in Patients Following Coronary Artery Bypass Surgery

Kristen White, Graduate
Dr. Kimberly Cleary, Dr. Tanya LaPier, Physical Therapy

Implementing exercise as a lifestyle behavior is important for secondary disease prevention, proper recovery, and return to function in patients following coronary artery bypass (CAB) surgery. With many barriers to regular exercise, physical and functional outcomes during recovery from surgery may be diminished. The purpose of the qualitative study was to explore the factors that influence participation in cardiac rehabilitation (CR), feelings about exercise, health and quality of life, and perceived activity limitations in patients who have undergone CAB surgery. Twenty-eight patients underwent CAB surgery and participated in a three-month post-operative interview. Patient responses were organized into themes for each category. Responses to participation in CR were arranged into six themes. Eight themes described factors helping subjects to exercise. Data regarding reasons preventing people from exercising produced five themes. Feelings about health/quality of life and perceived activity limitations yielded four themes each. These specific themes will be reported further. With adequate identification of common responses, educational strategies can be focused to improve exercise adherence and, ultimately, enhance function and quality of life.

Orangeism vs. Nationalism: The Role of Ulster in the Partition on Ireland 1886-1921

Blaine Wickham, Undergraduate
Dr. Ann Le Bar, Dr. Martin Seedorf, History

In 1921 Ireland and Britain met to discuss the terms of a truce of the Anglo-Irish War and a tentative Home Rule for Ireland. However, the British government was hesitant to grant Ireland Home Rule status. Why? Because of Ulster. Ulster always had close ties with Britain, economically, socially and religiously. When it came time to grant Ireland Free State status (a step further than Home Rule) these ties, coupled with Ulster's own actions, were able to stop the whole of Ireland from receiving Free State status. It is my intention in this paper to answer the question of how. What did the Ulster unionists do to ensure that they would remain with the United Kingdom, thus resulting in the partition of Ireland?
The Winding Stair of History: The Haunting of Derek Walcott's Omeros

Ariadne Wilber, Graduate
Dr. Anthony Flinn, English

It is an ongoing theme in the writing of Derek Walcott to not only embrace the charge of imitation and mimesis, but to acknowledge, embrace and define that need. He takes ownership of the "old world" of history and literature, displaying the imprint and influence that the Masters of ancient and modern times have on his writing, but also making the work distinctly and culturally his own. A plethora of writers have been studied as the major influences for Omeros, especially James Joyce, and while this relationship has been the focus of contemporary scholarship on the subject, W.B. Yeats is the most influential writer in Derek Walcott's intertextual toolbox. Because of his relationship and understanding of Yeats' theory of history and cyclical phases, Walcott is able to effectively use Homer as a tool in Omeros; without this fundamental understanding of Yeats, Omeros would be little more than a fun modern-day retelling of Homer's Iliad. Instead, it is a masterpiece all its own, with the voices of the past echoing in the background and giving the work a softly-playing, haunting soundtrack to make it all the more rich, applicable, and important to both the people of St. Lucia and to the modern world.

Case Study: A Division 1 Women's Collegiate Basketball Player with Brachial Plexus Neuropraxia

Jessica Winebarger, Undergraduate
Dr. Jeff Kawaguchi, Physical Education

Brachial plexus neuropraxia is often seen in sports as a traction or compression injury. This type of injury is most commonly as a result of a direct fall on the arm or blow to the neck (Haynes 1993). This case study will highlight types of nerve injuries, ways to evaluate for a nerve injury of the brachial plexus, treatment and return to play criteria for an athlete who has suffered this type of injury. This case study focuses on an eighteen-year-old women's collegiate basketball player who suffered a brachial plexus injury. The initial evaluation and treatment were provided by an athletic training student with follow up evaluations by the team doctor. The rehabilitation was a slow process, with strengthening and stretching within tolerance. The player returned to play within a week of injury.

Collada Gaining Some Common Ground

Jason Winters, Graduate
Dr. R. William Clark, Computer Science

Collada is a markup language used to describe attributes of a 3D scene. The scene can contain anything from complex 3D models to light locations. Collada is used as an intermediate format between two programs. By having an intermediate format there is common language that is used to communicate between the two programs. This allows an artist to create the scene using common modeling tools like 3DS max and export the scene to Collada. A programmer can then take that Collada file and import it into their software. By using Collada as an intermediate format neither the programmer nor the artist needs to be aware of what tools the other is using. Several companies have already started to use Collada for this very reason. Nintendo, Sony and Microsoft are all using Collada in their game development on their current generation of consoles. Given Collada's generic file format, it is very easy to edit the files directly using a text editor. Since the files are easy to edit anyone who has basic knowledge of 3D models can edit the scene easily without using expensive software.
Leibniz's Mill, Searle's Chinese Room, and Thought Experiments of the Mind

Caleb Woodrow, Undergraduate

Dr. Kevin S. Decker, Philosophy

The aim of this paper is to explore the use of thought experiments in the philosophy of mind. Two thought experiments are given as case studies. The first is Leibniz's Mill Argument, and the second is John Searle's Chinese Room Argument. Both of these arguments are aimed against reductive materialism. Different interpretations of the Mill Argument are analyzed and discussed. As well, some critiques are offered against the Chinese Room Argument. The paper concludes with whether or not thought experiments have a place in the philosophy of mind, and what role they play if they do.

Conceptual Framework of a Handbook for Athletes at Risk

Rachi Wortham, Graduate

Jim Nendel, Physical Therapy

A Handbook for Athletes At-Risk is a necessity for our society. There are student handbooks as well as athlete handbooks but there is only one Athlete at Risk handbook in the country. Implementing a handbook of this sort will create avenues for the students to achieve in their most favorable academic situations. It will give each athlete a chance at searching for help and knowing exactly where to look for help at any specific time. A typical athlete handbook is very helpful at times, although, it does excludes the fact that all athletes are not alike. Some athletes at risk strive in group settings; some athletes are better off by themselves and many times there is a combination of the two that best fits these athletes. This balance is very important when you are a coach of these athletes, simply because you want them to be able to adapt to all possible situations that may occur during their career under your supervision (Condor, 1996). The handbook is simply a way to build a bridge between the athletes, coaches, and teachers of academia (Evans, 1993).

The Effects of Generalized Anxiety Disorder on Marital Satisfaction

Ia Xiong, Sarah Nicholson, Jennifer Lamar, Megan Suda, Undergraduates

Dr. Kayleen Islam-Zwart, Psychology

Literature has shown that generalized anxiety disorder (GAD) is associated with dissatisfaction in social relationships, marriage in particular. This study utilized archival data collected as part of the National Comorbidity Survey (Kessler, 2000). Participants included 4,398 married individuals, 210 with GAD and 4,188 without GAD. Perceived frequency of criticisms from a spouse as well as ability to relax and be oneself were used as a measure of marital satisfaction. Results showed that there was a significant difference between how a person with and a person without GAD responded, suggesting that GAD negatively effects marital satisfaction and close relationships. This research suggests the importance of identifying the presence of GAD and has implications for couples treatment.
Increasing English Learners' Motivation Through Games in Classrooms
Li-Tsai Yang, Graduate
Dr. LaVona Reeves, TESL

Increasing English learner's motivation through games in classrooms by Yang
In Taiwan, students have to learn English as a mandatory subject from elementary school through university. Most students will have memorized considerable English vocabulary, acquired reading skills, and mastered complex grammar structures due to the competitive college entrance examinations. However, their learning is focused on academic purposes. It is very common for students to forget what they have learned after they pass the entrance examinations. If there were no entrance examinations, most students would not be particularly motivated to learn English due to the lack of motivation. Motivation is the learners' desire to learn or to achieve something. Using games in a language classroom is one of the strategies to increase learners' motivation because using games can work against all the fear and frustration with language that many students always feel and that we can stimulate more fascination and joy in learning language among students, games will make students more knowledgeable and sensitive to the aspects of language and linguistic abilities, and games can help students develop their critical thinking abilities.

Lessons in Leaving
Tana Young, Graduate
Dr. Jonathan Johnson, Creative Writing

I define memoir as the inner spiritual journey of an individual, in connection with a greater historical event. In this memoir, I write about the connection between my early childhood experiences of living in Japan during the 1950s, to the post WWII occupation. We were the children of conquerers, living in the land of the conquered. I speak about the relationship between my siblings, and my parents, noting the paradoxes of my intense bonds with that place and the people who cared for me gently, against the harshness of my own familial experiences.

The Intersection of Free Verse and Form
Maya Zeller, Jessica Moll, Graduate
Dr. Jonathan Johnson, Creative Writing

The departure from closed form to open verse in mid-19th century America gave poets the impetus to explore new structural territory in writing. Contemporary poets have taken this sense of permission to new levels, often mixing formal impulses in their free verse poetry. Poet Gerald Stern wrote American Sonnets, a book-length collection of "broken" sonnets, redefining what the form means. In this presentation, I will share how I adhere to--or depart from--form in my own work, specifically focusing on the sonnet form.

Landscape as Character: Wild Settings
Maya Zeller, Graduate
Dr. Jonathan Johnson, Creative Writing

Writers often make use of setting to establish tone in creative works, or rely on geography or temporality to create symbolism. Perhaps a more specific application of this is when poets allow landscape to interact at such a level that it becomes a recurring or morphing character in my work. I will be examining the ways I and my close literary influences use landscape