

*First Annual*  
***Ranger Research Day***

Northwestern Oklahoma State University  
Alva, Oklahoma ~ March 30, 2007

**Key-note Speaker, Dr. Stephen W. Painton**

Chair, Department of Communication Science and Disorders  
School of Allied Health  
University of Oklahoma Health Sciences Center

Dr. Painton is a former Alva resident and 1969 Northwestern Oklahoma State University graduate. In 1997, he was honored by the Northwestern Foundation as an Outstanding Graduate in education. He is director of the John W. Keys Speech and Hearing Center and associate professor and undergraduate coordinator for the Department of Communication Sciences and Disorders, all at the University of Oklahoma Health and Sciences Center (OUHSC).

A native of Hardtner, Kansas, Painton was reared primarily in Alva, attended Washington Elementary School and Alva Junior High and graduated from Alva High School with the Class of 1965. At Northwestern, he majored in speech and biology, played some baseball and was active in Student Government Association. It was in college that Painton was convinced by speech professor John Barton to pursue a career in audiology.

After completing his master's degree (in Education of the Deaf) a year later at OUHSC, Painton served two years in the U.S. Army. He then returned to OUHSC to begin the doctoral program in audiology.

Finishing his degree, he joined the faculty at Northeastern State University in Tahlequah where he taught speech-reading, audiology, exceptional children, speech mechanisms and manual communications. He also developed a graduate program in speech-language pathology to meet American Speech and Hearing Association standards.

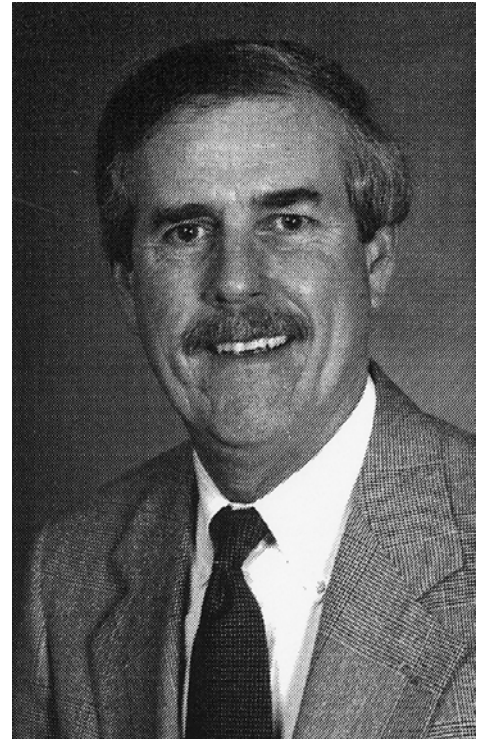
Painton also owned and operated the Northeast Oklahoma Hearing Center in Tahlequah for three years, served for one year as audiologist with the W.W. Hastings Indian Hospital and served four years as an audiology consultant with the Cherokee County Health Department during his years in Tahlequah.

He then became associate professor and chair of the Department of Communicative Disorders at East Tennessee State University in Johnson City, Tennessee. There he taught phonetics, aural rehabilitation and pediatric audiology and administered three degree programs.

From 1990 until the present, Painton has been an associate professor at OUHSC. From 1990 until 1995, he was associate dean of the College of Allied Health, then was named to his current position as clinic director. He oversees all aspects of the audiology and speech-language pathology clinics.

Painton is a member of the American Speech-Language-Hearing Association, the American Academy of Audiology, American Auditory Society and the Oklahoma Speech and Hearing Association. He has authored and co-authored a number of articles concerning hearing aides and all aspects of auditory problems and diseases in adults and children.

Painton and his wife Sue have two sons, Randy and Cory. Sue is the clinical manager of the Columbia-Presbyterian Comprehensive Outpatient Rehabilitation Facility (CORF) in Oklahoma City.



# *Ranger Research Day*

Northwestern Oklahoma State University

## *A B S T R A C T S*

### *Arts and Music*

1.01 Art & Design

1.02 Music

1.03 Theater & Dance

#### **1.03.01 Brook Weiss**

**Undergraduate; Kimberly Weast, sponsor**

#### **“An Evening of Susan Glaspell” Costume Designs**

When beginning to prepare for the production “An Evening of Susan Glaspell” consisting of the two plays “Trifles” and “Suppressed Desires,” I realized that the costuming was going to be a unique challenge. I was handed two plays both set in the early 1900’s. I immediately began my research. The costumes needed to not only reflect the time period but also the unique characters in each play. When researching I found a variety of differences between the two plays. “Trifles” dealt with the earlier fashion of the 1900’s, but also the later fashion of the late 1800’s. The show was set in Iowa, so the costuming also had to reflect that. Once I found the desired patterns for the costumes, I researched the colors, fabric type, and significance of each aspect so that I could understand how the clothing was valuable to people in that era. Once I found appropriate coloring I tailored it to the character; adding authenticity to the show and personality to each character. The women’s attire was created and sewn based upon my designs and the males attire I found from various costume shops and made phone calls to people in different areas that were part of the Amish community. For “Suppressed Desires” I again researched fabric, colors, and style. The clothing was richer and the fabrics were more delicate verses durable. There was definitely a difference in the need for clothing. In “Suppressed Desires” the clothing needed to merely be fashionable with no specific purpose, while the characters in “Trifles” had a purpose behind the clothing they wore. Like “Trifles,” I wanted to tailor the costumes for “Suppressed Desires” to the characters unique personalities as well as make them authentic to the era. Both shows consisted of a lot of time, research, and major differences. [Display Only]

#### **1.03.02 Heather Munn**

**Undergraduate; Kimberly Weast, sponsor**

#### **An Evening of Susan Glaspell Publicity Design**

Working on the publicity for “An Evening of Susan Glaspell” helped me to learn a lot about what was important in the early 1900s. The first play I researched was “Trifles”. “Trifles” is a very conservative play about two women that join together to protect their own. The other play was “Suppressed Desires”. “Suppressed Desires” was a light-hearted play about psycho-analysis. It was difficult to figure out a common theme between both of the shows. I chose to focus on Susan Glaspell; therefore, she was the main aspect on both

the flyers and the playbill. For the “Trifles” section of the playbill, I chose to put a birdcage behind the cast names. The birdcage symbolizes the fact that the men kept their women confined, yet the women long to break out of their cage. For “Suppressed Desires”, I chose to use Sigmund Freud. It was the natural choice, as he is the inventor of psycho-analysis. I chose to put my designs on yellow paper to signify the culture of the early 1900s. I chose the font color as red since red signifies deceit. I believe that there is a bit of deceit in everyone, which is especially significant in “An Evening of Susan Glaspell”.  
[Display Only]

## ***Business***

- 2.01 Accounting
- 2.02 General Business Administration
- 2.03 Business Communication
- 2.04 Economics
- 2.05 Finance
- 2.06 Information (MIS) Operations Management
- 2.07 Management
- 2.08 Marketing

## ***Education***

### 3.01 Curriculum

#### **3.01.01 Dr. Jim Therrell**

##### **Faculty**

##### **Supporting Student Learning: The Formulation and Practice of New Teaching Strategies**

Through observations and interviews of teachers and students in a post-secondary context (specifically, College Algebra), this study investigates how new teaching strategies are initially formulated, practiced, and adapted over time. Differences in student learning and outcomes are recorded and analyzed for any relationships to teaching strategies. The findings of this study are meant to inform chiefly teachers, administrators, and policymakers who make decisions regarding the support and enhancement of teaching and learning. [Display Only]

#### **3.01.02 Kristal Randall**

##### **Faculty**

##### **Teacher Interaction and Support in a Dual Language Classroom**

The purpose of this study is to identify how an outstanding English Language Learner (ELL) educator supports language acquisition in their classroom. This is particularly significant at this time due to the growing ELL population in public schools and the need for teacher education programs and practicing teachers to familiarize themselves with the strategies for effectively teaching this diverse group of incoming students. Two educators in a dual language immersion program were observed, video taped, and interviewed over a period of 4 months as they instructed in Spanish. Their support for learners of both native English and native Spanish students was noted. Findings include the importance of vocabulary development in the classroom as well as supportive interactions and constructivist methodology.

### 3.02 Gerontology

- 3.03 Human Environmental Sciences
- 3.04 Kinesiology, Health Studies & Special Services

**3.04.01 Megan Fowler**

**Undergraduate; Dr. Jim Therrell, sponsor**

**A Study of Playgrounds**

Identifying which components of school playground equipment are most popular and how these components are used specifically helps educators to better understand the value of play and more productively manage the current and future usage of the playground for their students. Vygotsky's theory of proximal development Piagetian stages were the theoretical lenses through which observations were conducted. Methods included quantitative (observation/tallies of usage) and qualitative (observing/field notes of play patterns). This study identified the top three most popular components at each of two playgrounds, then noted how the students were using these components. Findings include: at site #1 the top three pieces of equipment were the merry-go-round, the swings, and the teeter-totters. At site #2 the three most popular pieces of equipment were the foursquare courts, the play center, and the basketball courts. Some considerations for the differences may be attributed to the different ages of the students and the older grades showed more interest in games with rules play.

- 3.05 Professional Teacher Education

**3.05.01 Dr. Lisa Holder**

**Faculty**

**Teachers as Bullies – Through the Eyes of Tomorrow's Educators**

Although copious amounts of literature can be found on the topic of student-to-student bullying, few researchers have investigated the disturbing issue of teacher-to-student bullying.

This study examines the views of current teacher education candidates at Northwestern Oklahoma State University toward the subject of teacher bullying. Teacher education candidates were asked to complete an open-ended questionnaire after reading and discussing the following definition of teacher bullying: "Bullying by teachers (or other staff, including coaches who have supervisory control over students) is defined as a pattern of conduct, rooted in a power differential, that threatens, harms, humiliates, induces fear, or causes students substantial emotional distress" (Alan McEvoy, Ph.D.).

The purpose of the study is to determine the extent to which Northwestern's teacher education candidates themselves perceive they were bullied by P-12 teachers/staff. The findings are then investigated and discussed to ultimately discover if teacher education candidates view teacher bullying as a serious issue in P-12 schools. The role of these future educators in improving the overall quality of the school setting is also examined.

- 3.06 Psychology

**3.06.01 Paula Nevius**

**Undergraduate; Dr. Wayne McMillin, sponsor**

**Empathy, Prosocial Helping Behaviors and Career Choice**

To what extent is the trait of empathy related to one's ability to provide compassionate care and is it a leading factor in choice of career? Empathy plays a key role in one's ability to comfort, counsel, and support those individuals who are experiencing crisis, grief, or trauma. Research has shown empathy to be a critical component of prosocial

helping behaviors. Furthermore, it is suggested that some students seek careers that utilize their empathic skills while others find themselves in career fields that require high levels of empathy, only to find that they do not possess this requisite trait. The purpose of this study is to understand the trait of empathy, whether it promotes higher levels of prosocial helping behaviors and how either or both of these factors contribute to one's choice of career. The results of this study of 36 college students indicate that those individuals with high levels of empathy also have high levels of prosocial helping behaviors. It also indicates that those with high levels of empathy may select majors that lead to service-oriented professions. The implications of these findings are discussed.

### **3.06.02 Dr. Mark Davis**

#### **Faculty**

#### **Low Attendance? Low Grades!**

Analysis of attendance information in comparison to student grades for exams and/or final grades suggests a possible correlation. Although other factors such as inherent differences between students motivation and interest in school, number of hours spent working, etc. are likely to play a part in either high or low grades as well as attendance, it does appear that there is a link between students grades and attendance. The evidence obtained in this limited initial analysis suggested that students missing class 6 or more times for a 45 session class tended to make grades one or more grade levels below those with less than 6 absences.

### **3.06.03 Dr. Nancy Knous**

#### **Faculty**

#### **Factors Related to Student Attitudes Toward Interactive Television and Online Courses**

As more courses are provided over interactive television and over the internet, factors related to student attitudes toward those types of courses need to be assessed. A correlational study investigating student attitudes toward interactive television and online courses and their relationship to site location and the personality characteristics of general self-efficacy, proactive attitude, and self-regulation was performed utilizing students who take courses through Northwestern Oklahoma State University at four separate locations (Alva, Enid, Woodward, and Ponca City). Results indicated positive correlations between enjoyment of ITV courses and self-efficacy. There were also positive correlations between site location and both proactive attitude and Self Regulation, but not self-efficacy. A positive correlation also existed between attitudes toward online courses and both self-efficacy and self-regulation.

### **3.06.04 Kaylyn Aragon, Christin Phelps, Amanda Wiles**

#### **Undergraduate; Dr. Nancy Knous, sponsor**

#### **College Students' Procrastination in Correlation with Self-Efficacy and Stress**

This study is exploring the correlation between stress, self-efficacy, and procrastination among college students. Three surveys will be distributed to approximately one hundred college students on the Alva campus of Northwestern Oklahoma State University, including a Survey of Recent Life Experiences (a measure of hassles), a Self-Efficacy inventory (Ralf Schwarzer), and a Procrastination Scale (Ralf Schwarzer) to determine the levels of each variable. The results of the surveys will be analyzed to find the relationships between stress, self-efficacy, and procrastination that occurs within the daily

lives of students. We expect to find that procrastination will be positively correlated to stress and negatively correlated to self-efficacy. Data is currently being collected.  
(Preliminary data)

### **3.06.05 R.T. Jacobson**

**Undergraduate; Dr. Wayne McMillin, sponsor**

#### **Materialism, Age, Gender, and Marital Status**

The purpose of this study was to determine if a difference in materialism was present among different age groups, males and females, and those who are married or single. The study was based on three traits linked highly to materialism: Possessiveness, nongenerosity, and envy. The main hypotheses of this study was that as age increases materialism will decrease. Therefore all three traits are expected to be lower for people who are older and higher for those who are younger. Additionally, females were expected to rate higher in the 3 traits of materialism than males. Finally, those who are married were expected to be lower in the 3 traits of materialism than those who are single. While none of the hypotheses were supported in this study, there were several trends that were closely tied to the hypotheses. Discussion of the results and the implications of the study are presented.

### **3.06.06 G. Jackson**

**Undergraduate; Dr. Wayne McMillin, sponsor**

#### **Generational Perceptions of Personality for Contemporary and Traditional Names**

The purpose of this study is to investigate the extent to which there are generational differences in the perceptions of names. It is hypothesized that people from older generations will view traditional names more favorably than younger generations. Conversely, older generations will view contemporary names less favorably than the younger generations. Fifty-seven participants were selected from a small Midwestern university and a local senior citizens facility. Informed consent was obtained from each participant. Participants were sorted into generational groups based on year of birth. Two groups were identified: Group one included the G. I., Silent, and Baby boomers and group two consisted of generation X. Each group was given the Revised Name Connotation Profile. They were asked to rate a list of both traditional and contemporary names (e.g., contemporary name = Mia, traditional name = John). Analysis revealed that the G.I., Silent, Baby Boomer generations rated the traditional names higher. The Generation X group rated the contemporary names higher. The results and implications of this study are discussed.

### **3.06.07 W. L. McMillin, P. Nevius & S. A. Thompson**

**Faculty & Graduate; Dr. Wayne McMillin, sponsor**

#### **Smokeless Tobacco Use among Northwest Oklahoma Adolescents: A Focus Group Study**

Studies have shown that the use of smokeless tobacco by adolescents is prevalent in our society and that use among adolescents is much higher in rural agricultural groups than in other groups (e.g., Oklahoma State Department of Health). The purpose of this study is to investigate the use of smokeless tobacco among adolescents in a six-county area of Northwest Oklahoma. A cluster sample of adolescent youth from area schools in Alfalfa, Blaine, Garfield, Grant, Kingfisher, and Major counties were asked to participate in the study. Each school was provided with a copy of the proposal and a release form. The focus groups consisted of 10-15 students from each school. All students were informed

through an oral solicitation statement about the personal nature of this study and were assured of anonymity and that no identifiable information would be on the questionnaire. The questionnaire contains questions designed to measure knowledge and use of smokeless tobacco among adolescents, such as: Frequency of use, types of spit tobacco used, reasons for uses, and availability. The focus group discussion was recorded and consisted of free flowing guided dialogue from the questionnaire information. The results and implications of this study are discussed. [Display Only]

**3.06.08 W. L. McMillin, P. Nevius, and M. Singleton  
Faculty and Undergraduate; Dr. Wayne McMillin, sponsor  
Enid Community Charitable Agency Assessment**

The purpose of this study was to investigate the perceptions and attitudes of the Enid community toward the various local charitable agencies. A survey was designed to provide descriptive information about the respondents and their perceptions about local charities. Additionally, information concerning the respondent's view of their own volunteerism was collected. After receiving informed consent, a sample of 296 participants was obtained. The average age was 40.18, ranging from 16 to 88 years. The sample was primarily female (77%), married (57.9%) and Caucasian (91.5%). The results indicate that roughly 82% agreed or strongly agreed that they were satisfied with their volunteer work. Over 88% indicated that they intended to continue their volunteer efforts and 70% felt that their identity was closely tied to their volunteer efforts. Correlational analysis revealed that all 3 variables are positively related and significant at the .01 level. For intent to continue and satisfaction with volunteering  $r = .59$ . Satisfaction with volunteering and identity  $r = .49$ . Finally, for intent to continue and identity  $r = .63$ . Additional descriptive analysis revealed that the profile of the typical volunteer in the Enid community is that of a middle aged, married, Caucasian, full-time employed, female, having at least some college education and has been a long time resident of the Enid community. The implications of these findings are discussed. [Display Only]

**3.06.09 Dr. Nancy J. Knous  
Faculty**

**Self-Efficacy, Proactive Attitude, and Self-Regulation in Students in Interactive Television and Online Courses**

Generalized self-efficacy, proactive attitude, and self-regulation are personality characteristics that reflect beliefs about personal competence, the ability to effect change, and the ability to maintain focus on a task. All three characteristics are correlated with each other. Completing college courses provided through interactive television and online formats may be enhanced by the presence of these characteristics. As a first step toward evaluating this hypothesis, approximately 100 students taking interactive television and/or online courses through a small regional multi-campus university at 4 separate locations completed a survey which included questions pertaining to these three characteristics. A one-way analysis of variance for each characteristic was performed for the four sites. No significant differences were found among the groups for any of the three characteristics, indicating that for students enrolled in interactive and/or online courses, these personality characteristics are similar regardless of location of student. Comparisons on these characteristics between students taking these types of courses and students who take only face-to-face onsite courses could lead to better understanding of how these characteristics affect enrollment choices.

### **3.06.10 Amy L. Lowe**

**Undergraduate; Dr. Wayne McMillin, sponsor**

#### **Text Anxiety and Self-Esteem: Does it Affect Academic Performance?**

This study explored the effects of self-esteem and test anxiety on academic performance. Eighty undergraduate and graduate students attending Northwestern Oklahoma State University and Northern Oklahoma College filled out a questionnaire concerning self-esteem levels, test anxiety and academic performance. The two instruments used in this study included The Westside Anxiety Scale (Driscoll, 2004) and Rosenberg's Self-esteem Scale (Rosenberg, 1965). Participants filled out a 20 question survey, with 10 questions concerning test anxiety using a five point Likert-type scale, and 10 questions about self-esteem that used a four point Likert-type scale. The design used for this study was an ex post facto study with a 2x2 factorial design. There was a significant effect found between self-esteem and test anxiety. However, there was no significance found between self-esteem and test anxiety applied to grade point average. The implications of this research will be discussed.

### **3.06.11 Aranda Emmerson**

**Undergraduate; Dr. Wayne McMillin, sponsor**

#### **Generational Differences in Attitudes Toward Academic Cheating**

This purpose of this study is to explore the generational differences in attitudes toward cheating. Thirty-six participants took place in this study in which there were eight men and twenty-eight women. Three generational groups were formed; Early Adulthood (20-38 years of age), Middle Adulthood (39-58 years of age), and Late Adulthood (59 years of age and greater). After giving their informed consent all of the participants completed the Attitudes Toward Cheating (ATC) Scale developed by Gardner and Melvin (1988). Higher scores on the ATC indicate a higher condemnation of cheating. ANOVA results indicate that there is not a significant difference between any of the age groups,  $F(2, 33)=1.24$ ,  $p=.30$ . The Early Adulthood group had an average score of 16.38 and Late Adulthood group had an average score of 16.55 which was not statistically significant and indicates that they do not differ in their attitudes toward cheating. However, the Middle Adulthood group had a higher score of 24.33. This shows that they feel more critical towards cheating. While not significant this pronounced difference between the Middle Adulthood group and the other groups is noted. Further discussion and implications are presented.

### **3.06.12 Stephanie K. Mavity**

**Undergraduate; Dr. Wayne McMillin, sponsor**

#### **Personality Differences and the Need for Uniqueness**

The present study examines the Need for Uniqueness and the difference of this need in both introverts and extraverts. This study also discusses how this need is expressed, whether it be creative choice conformity, avoidance to similarity, or unpopular choice counter conformity. There were 48 participants surveyed and the data was analyzed to prove or disprove the hypothesis. There were no statistically significant differences in the Need for Uniqueness between extraverts and introverts.

## *Liberal Arts*

### 4.01 Communication

### 4.02 English

#### **4.02.01 Dr. Sandra Petree**

##### **Faculty**

##### **“Recollections of Past Days”: The Autobiography of Patience Loader Rozsa**

##### **Archer, ed. Sandra Ailey Petree**

Patience Loader Rozsa Archer was a British convert to the Church of Jesus Christ of Latter-day Saints. With her father's family she emigrated to America in 1855 on the ship John J. Boyd. After arriving in New York, her family learned that they had been assigned to travel some 2,000 miles to the valley of the Great Salt Lake by rail and then handcart. Part of the infamous Martin Handcart Company, the Loaders suffered great privation and the loss of their provider when Patience's father died en route. After arrival in the valley, Patience ignored the often-practiced polygamy and married a soldier from Johnston's Army. As an army wife, she traveled with the 10th Cavalry from Utah to Washington, D.C. in 1861 to participate in the Civil War. At war's end, Patience returned with her young children to Utah, burying her husband on the trail back. To support her family she cooked in mining camps in the American Fork Canyon. Sometime after 1888 she wrote, by hand, her memoirs, providing colorful descriptions of her experiences. My research, which took place over a five-year time span and included locational investigation in England and the western United States, enabled publication of Patience's autobiography as part of the Life Writings of Frontier Women Series, Utah State University Press. The book came out in the spring of 2006. [Display Only]

### 4.03 Foreign & Modern Languages

### 4.04 History

#### **4.04.01 Dr. Sharon Hill**

##### **Faculty**

##### **The 101 Ranch – A Ranching Empire Ahead of Its Time**

In 1893, Colonel George Washing Miller came to Oklahoma with one thing in mind, and that was to create a vast cattle empire. With his three sons, George L, Joe, and Zach, the Miller's created one of the greatest ranches in the history of the United States. Though the Ranch headquarters were in Marlin, Oklahoma, the 101 Ranch encompassed 101,000 acres, and the ranch ran from the panhandle of Oklahoma to near Bartlesville, Oklahoma. The 101 was not only enormous in size, but it was a ranch ahead of its time. Colonel Miller and his sons were some of the first to use scientific methods to produce superior cattle and agricultural products. In addition to being a farming and cattle empire, it was a self-sustaining city complete with its own electrical system, phone system, hotel, general store, oil refinery, packing plant, and dairy. The 101 Ranch was famous not only in Oklahoma but throughout the United States as well. It truly was a ranching empire that was ahead of its time. [Display Only]

#### **4.04.02 Dr. Eric J. Schmaltz**

##### **Faculty**

##### **The Long Trek: The Mass Transfer of Ukrainian Germans to “Greater” Germany, 1943-1945**

An evacuation of 350,000 ethnic Germans from Nazi-occupied Ukraine to the Polish Warthegau occurred between late 1943 and early 1945. In an improvised response to the Red Army's rapid western advance, the SS integrated them into “Greater” Germany upon

completion of racial screening at its Main Immigration Office in Lodz—the Nazi “Ellis Island” for ethnic Germans. The “long trek” by foot, wagon and train represented one part of a broader humanitarian crisis that afflicted Europe under both the Nazis and Soviet Communists, including above all Hitler’s Holocaust (1941-1945) and Stalin’s mass deportation of thirteen nationality groups (including ethnic Germans) to slave labor camps (1938-1951). One unique feature of the Ukrainian-German experience was that they found themselves caught between two powerful rival ideologies and thus twice endured forced mass-population transfers. About 20,000-25,000 died on the move west. After the war, more than 200,000 of these Soviet citizens of German nationality suffered repatriation under Allied agreements from Germany to Soviet Siberia and Central Asia. Roughly 30,000 out of the 75,000 permitted to remain in West Germany chose to leave Europe after 1948 as Displaced Persons for the Western Hemisphere and Australia. Jews, Poles, and ethnic-German minorities comprised the three primary DP groups. This period of upheaval, repression and even mass murder diminished Eastern Europe’s ethnic diversity. The Ukrainian-German experience in Poland also highlighted the stark racial dichotomy of the Nazi New Order. Lodz processed Germans into the Third Reich just as that city’s Jewish population, Europe’s last major ghetto, was liquidated.

#### **4.04.03 Bodie O’Donnell**

**Graduate; Dr. Jim Therrell, sponsor**

#### **How can history be used to stop the Mistakes of the Past: A look at the Vietnam and Iraq Wars**

This study was conducted during the fall semester of the year 2006 by Bodie O’Donnell, a graduate student at Northwestern Oklahoma State University, I looked at the Vietnam and Iraq Wars, and asked “Has the United States handled the Iraq War differently from the Vietnam War or, does history repeat itself?” During my literature review, many articles and or books agreed and/or stated that the Vietnam and Iraq Wars were similar. My quantitative data addressed issues such as the use of overwhelming force in reference to the Powell Doctrine. Surveying a freshman class, my qualitative findings were that both wars dealt with heavy media exposure, and shared similar reasons for America’s involvement. The differences between wars’ that stood out the most were the treatment of troops and the idea of culture. The treatment of troops returning during the Vietnam War was deplorable, whereas, troops of the Iraq War have been seen as heroes. Regarding culture, the South Vietnamese practiced Buddhism and pacifism, mostly farmers, whereas the people in Iraq are Muslim, and are fighting over sectarian rights to power.

4.05 Geography

4.06 Humanities

#### **4.06.01 Dr. Pat Steed**

**Faculty**

#### **Bohemia Domestica: Bloomsbury at Charleston**

Charleston serves as an example of the "Bloomsbury" modernist theory as applied to domestic art and culture. Charleston and its British Edwardian occupants--Clive and Vanessa Bell and their two children--continued the work of the arts and crafts movement begun by William Morris, a Victorian designer and poet. Vanessa Bell applied the modernist trend in painting in much the same way that her sister, Virginia Woolf, experimented with modernism in fiction. First, the poster presentation will offer visuals that distinguish the major differences between Victorian and Edwardian home design. Second, it will establish the connections between Vanessa Bell's designs and Virginia

Woolf's narrative style. I hope to show that a correlation exists between Woolf's fiction and her sister's domestic crafts to the extent that Charleston can be understood as a visual representation of the Bloomsbury modernist theory. The poster presentation will offer examples of Vanessa Bell's paintings and book jacket designs for her sister's novels. [Display Only]

#### **4.06.02 Dr. James Yates**

##### **Faculty**

##### **Exploring the Humanities: History, Film, and Drama -- From *King Lear* to the North Pole to the Mexican-American War and Back Again**

My presentation will be comprised of published articles in three areas interests: Polar Exploration, Film Adaptation, and Film and History. The first part consists of three articles which deal with my fascination in Polar Exploration. These articles deal with arctic explorers Sir William Parry, Francis Leopold McClintock, and Umberto Nobile and were published in the *Encyclopedia of the Arctic* (2005) edited by Mark Nutall for Routledge Press. The second group presents two articles which demonstrate my interest in film adaptation. These were published in *The Encyclopedia of Stage Adaptations on Film* (2004), edited by John Tibbetts and Jim Welsh: Shakespeare's *King Lear* and William Nicholson's *Shadowlands*. The final group is comprised of two articles which reflect my interest in the relationship between film and history: the first, "The Mexican-American War and the Spanish-American War" surveys the treatment of these conflicts on American movie screens. This essay was published in *The Columbia Companion to American History on Film* (2003), edited by Peter C. Rollins. The second piece is a review of the recent History Channel documentary entitled *Lincoln* and was published in the *Film and History Journal* this past summer. [Display Only]

#### 4.07 Philosophy

#### 4.08 Political Science

##### **4.08.01 Dr. Aaron L. Mason**

##### **Faculty**

##### **The Bureau of Indian Affairs, and the Changing Dynamics of American Federalism**

This paper presents data gathered from an original research project which discusses some of the important issues facing federal Indian policy in the current era of devolution. More specifically it considers the role which states are now playing in recognizing non-federally recognized tribes in the United States.

#### 4.09 Sociology & Substance Abuse Studies

##### **4.09.01 Lauren Hudson**

##### **Undergraduate; Dr. Kay Decker, sponsor**

##### **Juvenile Delinquency: The Need for Prevention Programs**

Statistics have shown that there is a growing and urgent problem in the United States today dealing with juvenile delinquency. A major concern facing society is that there are not enough high-quality, effective juvenile delinquency prevention programs that are implemented within schools and communities. The purpose of this study not only informed the reader of the children/youth who are considered "at-risk" for juvenile delinquency and/or future criminal behavior, but also focused on the need to get schools, communities, and parents involved in developing effective prevention programs for at-risk youth and those juveniles who are re-entering communities from the Juvenile Justice System. The objectives of this study were: (1) To identify the role of communities,

schools, and families in preventing delinquency in rural communities (2) To identify successful delinquency prevention and intervention programs and evaluate their benefits and efficiencies for use in low population areas (3) To measure those “at-risk” characteristics, which are most likely to serve as catalysts for delinquent behaviors (4) To develop the most cost-effective “Delinquency Awareness” communication strategies for community institutions to implement.

This study was carried out in Northwest Oklahoma. Results revealed that there are delinquency issues within the communities and schools that were surveyed. In addition to the finding that delinquency is a problem within the communities and schools studied, the study identified an effective strategy by which community institutions could prevent future juvenile delinquency from occurring while assisting with reentry issues to prevent recidivism. Thus, this study concluded that there is a need for collaborative efforts among schools and communities to create effective delinquency prevention programs for their population's specific needs.

#### **4.09.02 Dr. Orren Dale**

##### **Faculty**

##### **Human Behavior in the Social Environment**

2006 publication of a social work textbook by Allyn & Bacon/Longman. A text addressing human behavior and the social environment from a social systems perspective. Fifth edition of the book with three co-authors. [Display Only]

## *Math and Science*

### 6.01 Biology

#### **6.01.01 Emily Rodkey and Aaron J. Place**

##### **Undergraduate; Dr. Aaron Place, sponsor**

##### **Dorsal Pigmentation in the Colubrinae as it Relates to Defensive Behaviors**

There have been several studies assessing the association between snake dorsal pigmentation patterns and defensive behavior. Jackson et al. (1976) were among the first and most comprehensive to detail this correlation. The primary shortfall of Jackson et al. was that they did not consider the phylogenetic association between the taxa in their analysis. This paper reconsiders a subset of this previous dataset in a phylogenetic context. We also consider habitat as it relates to dorsal pigmentation pattern and camouflage. We performed a phylogenetic comparative method using the software program Mesquite. The phylogeny used in our analysis was a composite of two previously published phylogenies. Contrary to previous studies, we found no significant association between dorsal pigmentation and defensive behavior or habitat. Several caveats to phylogenetic approaches are discussed as well as future studies of correlates of snake defensive behavior.

#### **6.01.02 Dr. Aaron J. Place**

##### **Faculty**

##### **Sociological and Biological Characterization of Two Rattlesnake Hunts in Oklahoma**

Rattlesnake round-ups are a quintessentially Oklahoman experience. Previous studies have reported on these events in Oklahoma, and elsewhere, from sociological and biological perspectives. The long-term impact of hunting for these events on rattlesnake populations is still poorly studied and virtually unknown. The purpose of the present study

was two fold: 1) to gather sociologically relevant data on human attitudes towards snakes and their treatment at these events and 2) to gather biologically relevant data on the snakes themselves in an effort to begin tracking possible changes in demography. We attended two rattlesnake round-ups in the spring of 2006. At the Waynoka rattlesnake hunt, we attempted to quantify the general atmosphere of the event and measure how visitors perceived the treatment of the animals. At the Okeene rattlesnake hunt, we sampled 100 western diamondback rattlesnakes (*Crotalus atrox*) and measured, sexed, and scored several rattle morphometrics. The data collected at the Waynoka round-up suggests a care-free and carnival-like atmosphere. The data collected at the Okeene roundup is suggestive of initial changes in average sex ratios and body size. Sex ratios are shifting from male-biased to an even sex ratio and average length is decreasing. Possible scenarios for maintaining the economic benefits of rattlesnake hunts along with sustainable use are discussed.

### **6.01.03 Stephen An**

**Undergraduate; Dr. Aaron Place, sponsor**

#### **The Relation Between Alarm Pheromones and Corticosterone Levels in Western Diamond-Backed rattlesnakes (*Crotalus atrox*)**

Several studies have been done that assess the purpose of the cloacal scent gland secretions in snakes. This experiment focuses on the possibility that these secretions act as alarm pheromones. Adult Western Diamond-backed Rattlesnakes (*Crotalus atrox*) were individually exposed to dichloromethane extracts of cloacal scent gland secretions from conspecifics to determine whether it has an affect on the plasma corticosterone level. Corticosterone is a common glucocorticoid that is released in response to stress. Cellulose sponges were soaked in dichloromethane extracts of cloacal scent gland secretions and presented in perforated petrie dishes. Blood was collected from each snake after 30 minutes of exposure. Blood was immediately centrifugated and the plasma was stored separately until radioimmunoassays (RIA) could be conducted. Preliminary RIA results indicate that the alarm pheromone from the cloacal scent gland secretions increases the plasma corticosterone levels of conspecifics. Because cloacal scent gland secretions increase plasma corticosterone levels, conspecifics are able to metabolize stored energy to react appropriately (i.e., flee or flight) when confronted with threatening stimuli such as a predator.

### **6.01.04 Ashley Taylor**

**Undergraduate; Dr. Aaron Place, sponsor**

#### **Adaptive Scenarios of Rattlesnake Morphology and Food Preference**

The life history and behavior of the North American Rattlesnakes (*Crotalus* and *Sistrurus*) is well known. Both *Crotalus* and *Sistrurus* are distributed throughout North America. Rattlesnakes vary greatly in length that range from fractions of a foot to multiple feet. In addition to length differences, both *Crotalus* and *Sistrurus* have significantly diverse diets. In a previous study, we showed how the head length of rattlesnakes was related to prey preference. In the present study, we attempt to show a correlation between head length, fang length and diet by employing the use of the Ornstein-Uhlenbeck Processes. These processes were used to model the adaptive scenarios of rattlesnake morphology and food preferences. Several adaptive models were compared in an attempt to determine which one best describes the data collected. The best fitting model was selected by

comparing information criterion scores for each model. Additional variables and alternative analyses of adaptive hypotheses are discussed further as they relate to variation in morphology and feeding behavior in rattlesnakes.

#### **6.01.05 Kenny-Joe Wallen**

**Undergraduate; Dr. Cynthia Pfeifer-Hill, sponsor**

##### **The Effects of Physical Exercise on Cognitive Mental-Task-Induced Brain Activity, (using EEG analysis) in Sedentary Individuals Versus Physically Fit Individuals**

The purpose of this research was to observe if brain wave activity during a cognitive mental task, before and after a period of exercise, changes more in sedentary individuals compared to physically fit individuals. Published research has shown physical exercise decreases brain activity more in physically fit individuals performing a visual mental task than in sedentary individuals. Other research has shown no significant difference between the two fitness groups before and after exercise while performing language skill tests. This experiment is a variation of these studies. This study records EEG activity during a mathematical mental subtraction task before and after physical exercise (stationary cycling) on groups of sedentary and physically fit college age males. Each individual's fitness level was assessed prior to experimentation, using a version of a submaximal exercise test (cycle ergometer test). Heart and respiratory rate were also measured during the fitness assessment and during the exercise portion of the experiment.

Frontal lobe EEG was recorded using the BIOPAC interface module and software. The four brain wave frequencies (alpha, beta, theta, and delta) were analyzed for changes in wave amplitude ( $\mu\text{V}$ ) during the mental task periods (pre-exercise and post-exercise). Initial analysis of the data indicates that there is more change in wave amplitudes ("taller peaks and deeper valleys") during mental task-induced brain activity in sedentary individuals compared to physically fit individuals. The slowest frequency brain wave (delta wave, 0.1-3.0 Hz) exhibited the most change in amplitude.

#### 6.02 Chemistry

##### **6.02.01 Heath Stotts**

**Undergraduate; Dr. Jose Conceicao, sponsor**

##### **Covalency in Ionic Bonds**

The generalization that metals and non-metals react to form ionic compounds is not without exceptions. Numerous ionic compounds have lower melting points and solubilities than their counterparts. Fajans' rules have been used extensively over the past decades to explain these discrepancies in terms of the degree of covalency developed in the ionic bond. A systematic study of covalency in ionic bonding, using ab initio quantum mechanical methods, is undertaken here; Two dimensional electron density contour maps and natural bond orbital (NBO) analysis is performed. Comparisons to predictions of Fajans' rules are made. Similarities and discrepancies are discussed and possible comparative methods are proposed.

#### 6.03 Computer Science

#### 6.04 Forensic Science

#### 6.05 Mathematics & Statistics

## 6.06 Nursing

### **6.06.01 Dr. Carole A. McKenzie**

#### **Faculty**

#### **Incorporating Reflective Practice into a Senior Capstone Course**

The purpose of this project was to introduce reflective journaling into a capstone course in leadership/ management for pre-licensure and licensed BSN students. While previous student groups had effectively addressed key issues in their guided clinical reasoning journals, faculty recognized a lack of meaningful role awareness.

Review of reflective practice literature revealed potential for increasing student engagement in patient care encounters to promote positive changes in patterns of nurse caring. Faculty presented reflective practice material in lecture, assigned readings, and clinical exercises including concepts of personal accountability for role ownership and outcomes and the importance of holistic nursing practice involving body-mind-spirit of both nurses and patients. This emphasized personal practice perceptions, awareness of their values and priorities, ownership of their own practice, and holistic nursing practice involving body-mind-spirit.

Students were asked to select critical clinical experiences for reflective journaling using (guided) prompts on a reflective journal template. Guided questions focused on individual self awareness along with patient communication, behaviors, and response. The crux of the journals centered on a decision making section that gave learners opportunities to compare present and past nursing care with potential future changes in practice.

Outcomes of the project mainly centered around student journal responses, and these were impressively soul searching on patient needs and individual caring styles. One theme that emerged was that of role dissonance, with many student comments on their previous tendencies to overemphasize technical aspects of nursing and to save more overly caring interventions for special times or situations.

Faculty members used the journal to help student integrate role components of direct care, management, autonomy, and introspection and thus were able to use the journals to help students increase awareness of self and bridge the theory-practice gap. Faculty also found themselves using reflective practice strategies to examine their own role accountability and creativity in course design, teaching, and clinical supervision with students.

Participating course faculty concluded that reflective journaling is an important experience for any nurse in job transition or role reexamination. It provides a framework for examining practice and beliefs regarding self in patient care and for increasing self-accountability.

## 6.07 Physics & Engineering

## 6.08 Agriculture

# *Ranger Research Day*

Northwestern Oklahoma State University

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