

Feb 9th, 9:00 AM - 10:00 AM

## Poster Session 1

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# Learning Commons Map

**9:00-10:00**

## **(Learning Commons: Northwest Atrium)**

### **Poster Session 1**

#### **1) Study Abroad: The Real Motivations for the Pursuit of an International Experience**

By Nathaniel Arnold (Mentor: Dr. Kathleen Winters)

Political Science

This project is a well-structured, multi-faceted glimpse at the practical drawbacks of study abroad, and examines in a straightforward manner the limitations that face modern students who are interested in studying abroad. Through survey results collected from current ODU undergraduates, fiscal issues, family obligations, and limited contact with home and college campus are all shown to be essential factors in a student's decision whether or not to study abroad.

#### **2) What Affects Young People Who Voted for Obama in 2008 to Change Their Vote in 2012?**

By Tara E. Chang (Mentor: Dr. Kathleen Winters)

Political Science

This research project explores why young people who voted for Obama in 2008 changed their vote in 2012 or did not vote. By looking at the 22-30 age group the research will involve different subjects, such as researching how the youth received information about their candidate of choice while also researching the range of enthusiasm towards a candidate. I define young people as 22 to 30 because this age group was more likely to vote in both elections and as they got older their ideas and thinking may have changed. This hypothesis is important to look at because this age group created the most enthusiasm and energy for Obama in both elections.

#### **3) The Importance of a Bottom-up Approach in Crafting Policy Involving Firearms on College Campuses**

By Rachel Williams (Mentor: Dr. Kathleen Winters)

Political Science

This project will use previous literature to propose several benefits of employing the bottom-up approach when creating policy. A survey will be administered in order to gain a better perspective on how Old Dominion students feel about allowing firearms on campus. The survey results will also relay whether ODU students support the policy position that Virginia has taken. In addition to gaining insight into student opinion, the variables used in the survey will offer an outlook into what shapes students' attitudes on this issue.

#### **4) Does Age Influence Voter Turnout?**

By I'Esha Wynn (Mentor: Dr. Jesse Richman)

Political Science

Age has often been a major indication when describing voter turnout in the past. However, in this research design the effect of whether age directly impacted voter turnout or did other exterior factors such as income, education, or geographical location have a larger impact on voting behavior. All these factors were measured based on data retrieve from the 2008 U.S. Census Current Population Survey. This data was used to measure the correlation between the variables and voter turnout.

#### **5) Why Do Some People Stay Homeless and Others Do Not?**

By Christina Brady (Mentor: Dr. Jesse Richman)

Political Science

Being homeless is often an issue of being on the streets, returning to a home, then going back to the streets. What factors make it more likely for a person to return to housing and safely stay in housing? This research focuses on finding what factors, services, and programs make people more likely to keep themselves off the streets. Examination methods include examining the funding and general availability of certain programs and comparing them to the amount of homeless people in the local area, surveying general satisfaction with programs, and looking for gaps in awareness and weaknesses in otherwise effective programs so that the report not only examines the core problem, but potential solutions for improving effectiveness.

## **6) What Affects Stability in Voting Habits**

By Robert Potter (Mentor: Drs. Kathleen Winters & Jesse Richman)

Political Science

Although many studies and polls have been done about what causes people to vote in particular ways, there is little research on voting stability. What affects stability in voting habits? Why do some people vote for the same party every time, and others switch frequently? I examine the influence of the media, party ideology, peer pressure, and family.

## **7) Legislation's Effects on Gun Violence**

By Nathaniel Brown (Mentor: Dr. Jesse Richman)

Political Science

In the United States there is profound issue with gun violence. Over the past 18 months the mass shootings that have occurred have sparked public outrage and have brought gun control back to the forefront of mainstream media. Despite the vast amounts of research that this subject has produced, little has been done as a result of these studies. In other studies that were conducted in years past, topics such as suicide and interest groups were left out of the results. This study changes things and looks at different variables as an explanation for this violence that persists. This study has found that while legislation alone does not deter violence, the larger implications focus on a need for different types of legislation as well as enforcement of these laws.

## **8) Does Felon Disenfranchisement Reduce Voter Turnout?**

By Amber Pitzen (Mentor: Dr. Jesse Richman)

Political Science

This research project focused on determining the effects of felon disenfranchisement laws on voter turnout rates. I rank state laws according to the severity of voter disenfranchisement. Additional data is accessed from the Department of Justice Statistics in order to calculate the number of ex-felons and from the Current Population Survey to determine voter turnout rates in National Elections. Results indicate that states with more severe felon disenfranchisement laws have lower voter turnout rates than states with less severe felon disenfranchisement laws.

## **9) Creation of Virtual Geological Specimens for Viewing in Google Earth Using AutoDesk 123D Catch Technology**

By Melissa Bateman, Mary Martin,

& Dr. Declan De Paor (Mentor)

Geology

Moving courses on-line presents a problem for subjects such as geology that require students to study specimens of rocks, minerals, fossils, etc. In the past, instructors in distance education courses sometimes mailed samples out to their students or arranged for occasional onsite labs but both approaches have their problems. In the Geospatial Visualization research group at ODU, we are working to create virtual specimens. These models, once complete, will be entered into the Google Earth database for geologists and students across the globe to use. Previous undergraduate research students used a 3D laser scanner to create models but that is expensive and time-consuming. Using the AutoDesk 123D-Catch program to make three dimensional models of samples, the team has been manipulating the images to get the most detail available. We are currently working with mantle rocks sent to us from a colleague in Hawai'i. These are particularly good for teaching on-line as few students ever see mantle specimens in real life. Furthermore, these rocks will be destroyed in geochemical analyses so the virtual specimens serve as an archive. This research is supported by NSF grants 1022755 and 1034643.

## **10) Lake Ballard Phosphate and Grain Size Comparisons at the Sediment-Water Interface**

By Amanda Antosh, Daniel Christian, Rick Goshen, Jessi Strand, & Regan Thomas (Mentor: Dr. Fred Dobbs)

Ocean, Earth, and Atmospheric Sciences

Lake Ballard is a man-made lake in Portsmouth Virginia, and the site of our phosphate concentration and granulometry study. Knowing the amount of Phosphate in the lake is important because, phosphate is a limiting nutrient controlling the plankton population. To look at part of the phosphate cycle we concentrated on the sediment at the sediment-water interface.

Phosphate is predicted to bind better to smaller sediments due to the sediment's chemical composition. We hypothesized higher concentrations of phosphate would be present with smaller grain size. Using core and grab sampling methods we extracted sediment from the sediment-water interface. We then tested the phosphate concentrations using a Spectrophotometer and the mean grain size using the Malvern 2000g. We found no significant correlation between grain size and phosphate concentration. Further statistical analysis and phosphate studies on Lake Ballard will be necessary to confirm our findings.

### **11) Effects of Two Hurricanes on Groundwater Flow and Salinity at Lake Ballard**

By Micheal Hall, Robert Hiza, Robert Murray, & William Perry (Mentor: Dr. Fred Dobbs)

Ocean, Earth, and Atmospheric Sciences

Lake Ballard is an anthropogenic lake located in Portsmouth, VA at the Hoffer Creek Wildlife Preserve. In the summer of 2011, groundwater flow around the lake was drastically altered by Hurricane Irene. Following the storm, Segar (2012) calculated the time needed for groundwater flow to return to pre-Irene conditions. Using Darcy's Law as well as average and linear flow rates, Segar (2012) estimated it would take eight months for groundwater flow directions and rates around Lake Ballard to return to pre-storm behavior given average precipitation conditions. However, because of the wet summer in 2012, we hypothesized groundwater flow would not return to pre-Irene conditions in only eight months. Using depth-to-water measurements and elevation values taken at numerous wells around Lake Ballard, we calculated and mapped hydraulic heads to generate a groundwater contour map describing the flow. Additionally, conductivity and pH values from lake and well water reflect the long-term flow patterns around the lake. These groundwater flow and water quality data gathered around Lake Ballard support our hypothesis. In October 2012 Hurricane Sandy altered the groundwater flow pattern around Lake Ballard again. Sandy provided a unique opportunity to compare the effects of two hurricanes on Lake Ballard. Data revealed the degree of groundwater flow and water quality dynamics between the lake and the nearby tidal creek during and after the storm surge events. Historical information with water quality data revealed anomalies that highlight the complexity of the freshwater/saltwater interface at the lake. Studying the effects of hurricanes on groundwater flow and water quality in a coastal environment such as Lake Ballard may establish a better understanding of how sea level rise and salt water intrusion may affect coastal areas in the future.

### **12) Similarities and Differences between First Generation and Continuing Generation College Students**

By Dante Myers, Heather Bolen,

& Dr. Debra Major (Mentor)

Psychology

With the differences seen in first-generation college students (FGS) compared to continuing-generation college students (CGS) it is possible that there are also differences in coping self-efficacy, major commitment, and capitalization between the groups. The sample consisted of 537 STEM majors from two southeastern universities (88 women, 449 men, Mage = 20.08, SD = 4.195). There were four hypotheses in this study that looked at differences in academic performance, coping self-efficacy, major commitment, and capitalization between the two groups. An archival database from a separate larger study was used to assess the differences. The results indicated that there were no significant differences between groups in grade point average, coping self-efficacy, major commitment, capitalization interests, or capitalization self-efficacy. The results also indicated that FGS intended to capitalize and acted on their capitalization intentions more so than CGS. These STEM major FGS intending to capitalize and acting on these intentions may explain why there is no significant difference in grade point average between the two groups. This research provides suggestions for future research to either replicate or build on the current study.

### **13) The Effects of the Knowledge of Positive Marginality on Women in STEM Majors**

By Lauren Mahan, Dr. Valerie Morganson & Kristina Bauer (Mentor: Dr. Debra Major)

Psychology

Women are extremely underrepresented in the STEM (Science, Technology, Engineering, and Mathematics) fields. The purpose of this study is to test an attitude-based training intervention that inoculates STEM women against barriers using positive marginality as a framework. Positive marginality supposes that being in a socially marginalized position can be a source of strength, vibrancy, and radical possibility (Hall & Fine, 2005). Unlike past research that has focused primarily on the disadvantages of being in the social margin, this study contributes to the literature by focusing on the advantages. The sample consisted of thirty-six women in the Computer Science and Engineering majors at two southeastern universities. A survey served as a pre-test/post-test for our study, with an intervention (i.e., a positive marginality training video) in between the two surveys. Dependent samples t-tests were used to determine if there were any significant differences between pre- and post-tests on several outcomes (i.e., knowledge, major satisfaction, affective commitment, continuance commitment, major involvement, career identity, persistence intentions, positive marginality, and coping self-efficacy). In partial support of the hypotheses, we found that coping self-efficacy (i.e., a person's subjective appraisal of his/her ability to cope with the environmental demands of a stressful situation) was significantly higher after training ( $M = 3.92, SD = .76$ ) than before ( $M = 3.38, SD = .61$ ). Limitations of this study include small sample size and low reliability. Further research is needed to investigate positive marginality in STEM women.