



**CABRINI**  
UNIVERSITY

ARTS • RESEARCH • SCHOLARSHIP

# SYMPOSIUM

APRIL 30, 2019

Abstract Book

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## Undergraduate Artwork

### **Burkeholder, Cheyenne:**

Jeanne Komp

School of Business, Arts, and Media

"Magazine Design"

In my Graphic Design II class, I created a surfer magazine comprised of a cover, table of contents and a two-spread feature article. The purpose of the magazine was to entertain and inform readers all about surfing. The target audience was men 16-27 years of age who are interested in everything that has to do with surfing. The overall design was to feel like the represented the movement of surfing. I incorporated an analogous color scheme throughout with bright blues, greens and yellows. To develop my color palette, I took inspiration from surfboards. The masthead on the cover was designed in an all caps, bold font to reinforce the concept of movement. To make the design cohesive, I used the same color palette, folio, fonts and equal amount of white space to connect one page to the next. This design solution was created using Adobe Illustrator for the masthead, Adobe Photoshop for image manipulation and Adobe InDesign for the page layout.

### **Flick, Ashley:**

Jeanne Komp

School of Business, Arts, and Media

"The Hidden Truth (Coffee Table Book)"

The Hidden Truth was created as a fictitious coffee table book. During this project, I created a book, from front to back using an article for content in between. My subject matter is conspiracy theories, specifically aliens. I got the idea from my dad who was watching alien shows on tv when I came home from school. I then created the logo and gave the story a thought-provoking name. The front and back cover was inspired by other books similar to my topic which I found when researching. Finally, I researched and found the best fitting article for my topic and designed a cohesive style with that which carried throughout the pages. This style was a mash of vintage classified documents with bold modern colors, green and blue. These bold colors added a more simplistic touch to combat the busier black and white photos. This project was very important as it taught the process of designing a book from scratch. There were various research methods involved and as a result, a unique design was produced and reflected within its pages

### **Hartline, Jake:**

Jeanne Komp

School of Business, Arts, and Media

"Wildlife Adventure Style Guide"

The purpose of this project was to design the logo, stationery, and style guide for a fictional brand using the skills of typography, color, grid structure, and imagery. This fictional brand is a hybrid zoo and amusement park called Wildlife Adventure. This project is important because it demonstrates how to design a comprehensive brand while creating a captivating and synthetically pleasing logo and stationery while establishing flow and readability in the style guide. The Wildlife Adventure brand is targeted to middle income parents between the ages of 30-45 who have children ranging from 4-16 years of age and live in urban areas. The brand is comprised of a logo, stationery, and style guide. The logo is made up of both an icon and logotype, the stationery includes a business card, envelope, and letterhead, and the style guide consists of a cover, table of contents, and pages that breakdown the important aspects of the brand such as color, typography, and logo applications. The brand incorporates

dark green and orange colors and uses fonts Acumin Pro and Open Sans. The applications focus on real life examples such as merchandise, advertising, and digital platforms. The brand was developed using InDesign, Illustrator, and Photoshop. Illustrator was used to produce the Wildlife Adventure icon and logotype as well as the stationery, InDesign was used to layout the style guide in a cohesive manner, and Photoshop to edit the images used in the style guide.

**Hennessy, Genevieve:**

Jeanne Komp

School of Business, Arts, and Media

"Mental Health Advertisements"

This advertising project is meant to promote Mental Health Awareness on College Campuses. The goal of this ad series is to display the feelings of each form of mental health disorders in a way that could be visually understood and relatable. This visual effect was created through photo manipulation in Photoshop of my original photographs. The organization I am promoting, Active Minds, fit my target audience of college-level individuals. This project is special to me because I deal with anxiety and depression. I am aware that not everyone shares these mental disorders, and that those who do can feel very alone or hopeless when they don't have others they can relate to. I wanted the viewers relate to these issues well as to encourage those dealing with these disorders to seek help.

**Kelly, Kassondra:**

Jeanne Komp

School of Business, Arts, and Media

"Choc-O-Latte Product Design"

Choc-O-Latte was the outcome of a fair trade product and package design assignment. This purpose of the project was to develop a product using a fair trade commodity from a specified continent and target audience, then design the packaging. I was assigned Asia and the age demographic of 45-54. I specifically focused on the Philippines and the fair trade commodity of coffee. I chose the product of chocolate covered coffee bean clusters since it is unique and appeals to my assigned target audience. I envision my product to be for middle- to high-income adults, and would want it to be sold in grocery stores and fancy candy shops. The package design features a pattern that originated from a Philippines quilt and incorporates earthy colors to evoke an elegance and effectively market my product to the demographic. I used Adobe Illustrator to create the design and mock up the final product to make it look more authentic.

**Passaro, Nicole:**

Jeanne Komp

School of Business, Arts, and Media

"Rush Magazine"

The purpose of this project was to explore the different design elements and methods used when creating a magazine. The purpose of Rush magazine is to inform and entertain readers ages 18-30 with the latest news that pertains to the action movie/television genre. This magazine is meant to evoke an on-edge feeling reflecting the styles present in action movies. The fast-paced mood of the magazine was achieved through the choices of grid structure, typefaces, colors, geometric shapes, and dynamic images. The colors chosen for the magazine reflect the featured article's subject, which is the third installment of the John Wick franchise. The movie makes ample use of shadows and bright colors which is what I chose to expand upon in my magazine design. The project consists of a masthead, front cover,

table of contents, and a feature article spread, and was created using Adobe Illustrator, InDesign, and Photoshop.

**Reeves, Melanie:**

Jeanne Komp

School of Business, Arts, and Media

"Dockside Vineyard Identity"

Dockside Vineyard is the fictitious company established for Graphic Design III. This project is important because it taught me how to design the visual identity and create a brand for a company. My design solution was developed using Adobe Illustrator, Adobe InDesign, and Adobe Photoshop. The most time was spent designing the logo for the company. In order to create the logo, a minimum of one hundred sketches had to be created. The next step was to create the logo in Adobe Illustrator. Once the logo was completed, the identity manual was laid out in Adobe InDesign. The identity manual included elements such as the company and mission statement, logo statement, color palettes used, typography used, stationary, business letter, applications, size and margin of the logo and inappropriate uses of the logo. Dockside Vineyard is an upscale winery located by the water with featuring a cellar and wine tasting. The winery is also popular for holding weddings. The logo resembled a ship's wheel with wine bottles marrying the nautical and vineyard concepts.

**Spencer, Grace:**

Jeanne Komp

School of Business, Arts, and Media

""Positive Scents"- Fair Trade Lotion Bottle"

Positive Scents Lotion was created in my Graphic Design 1 class for a product and package design assignment. The purpose of the project was to create a fictitious product that incorporates an assigned continent and target audience with a fair-trade commodity of my choice. I was assigned South America with a 12 to 17-year-old target audience. I chose to focus on the country of Trinidad and Tobago and main target audience of older teenage girls. Since the colors in Trinidad and Tobago's flag are red, black and white and roses are the primary export flower in South America, I wanted to use rose as the main scent of the lotion. Rose essential oil possesses aromatherapy properties that calm and soothe. A recent study showed that rose and lavender oils can help treat anxiety and depression in post-partum women; while rose oil specifically has been shown to have a positive effect in treating depression. This "Positive Scents" Lotion is meant for teenage girls to relax when they use the product. Since girls like to smell good using berries or rose as a scent would make them stand out from other girls who might not wear perfumes or scented lotions. If someone compliments them on their scent that could build their self confidence in any situation. This design solution was created using Adobe Illustrator.

**Wallace, Kyle:**

Jeanne Komp

School of Business, Arts, and Media

"Stadiums of the NFL"

Stadiums of the NFL is a book that showcases all sport venues in the National Football League past, present and future. The purpose of this book is not only to showcase every stadium, but to inform readers about the history along with revealing the different processes of how stadiums are built, how they are funded, the different types of stadiums and also present the challenges faced when building and operating a large sports venue.

I wanted to incorporate as much text and images as possible in the book to give readers the context. I achieved this by organizing the text and images into grids, sizing text and images to ensure the layout is balanced and effectively using color in manner consistent with sports.

**Woodroffe, Breanna:**

Jeanne Komp

School of Business, Arts, and Media

"NEXT Magazine"

Next is a fictitious magazine created for Graphic Design II. The purpose of this project was to develop a magazine comprised of a masthead, cover, table of contents, and two-spread feature. Before designing my magazine, I researched well-designed and poorly-designed magazines to determine strategies that work. I chose to create a music magazine to entertain the reader about the latest R&B/Hip-Hop artist's new music releases, upcoming tours, interviews, personal life, etc. This project was important because it synthesizes concept, typography, page layout and software skills.

First, I developed a mood board to determine the overall feel of what my magazine would look like. Second, I had to devise a name and tagline suitable for the theme of the magazine. Third, I created the masthead. I wanted it to be simple yet bold with an angle cut through the letter X and the letter T. Fourth, I designed the cover using an image that would catch the readers eye by the bold use of color. Finally, I expanded the design in the creation of the table of contents followed by the two-spread feature. Since my feature spreads is based on an artist 6lack and his recent album East Atlanta Love Letter, I wanted the feature to tie in with the name of the album. This magazine was created using Adobe Illustrator, Adobe InDesign and Adobe Photoshop.

## **Undergraduate Oral Presentations**

### **Allen, Shamiah:**

Dr. John Cordes

School of Business, Arts, and Media

"Does Instagram Cause Individuals to Develop a Negative Body Image"

This pilot study researches how body image may be impacted by the pictures and text posted on the social media platform Instagram. My research question is: "Does use of Instagram correlate with a negative body image?" My hypothesis is that social media is a toxic mirror with postings having a strong impact on body image. This topic is important because it relates to the health and happiness of many people around the world. A ten-question survey will be administered to a convenience sample that will collect data on self-confidence, fake advertising by celebrities and influencers, and knowledge of Body Dysmorphic Disorder. Results will be available for the annual Symposium.

### **Alvarez-Mapp, Nia:**

Dr. Seth Frechie

School of Humanities and Social Sciences

"The Sound of Poetics of Medea"

This paper offers a Hip-Hop feminist perspective on Euripides' Medea. The article focus is about the double standard we observe in academic treatments of both Medea and her husband Jason. My work compares Euripides' play to modern examples, such as the music and songwriting of Kanye West, as well as the overall treatment of Black Women in modern society. In order to show that not much has changed from Ancient Greece until now, I will also examine the language of Euripides drama and that of the comparisons I draw, as well discuss audience reception in both classical and contemporary times.

### **Bachman, Robert:**

Dr. Seth Frechie

School of Humanities and Social Sciences

"The Screenwriting Process"

My presentation will focus on the nature of screenwriting in the American film industry, specifically how the writer, in direct contrast to other art forms (such as theater or television), is not the primary artist. By taking an in-depth look at this industry through first-person accounts from both aspiring and successful writers, and examining the role of the writer in films that get produced, the project attempts to determine whether or not pursuing a career as a Hollywood screenwriter is worth all the trouble, especially when the so-called "Golden Age of Television" seems to provide far more creative opportunities for promising writers. In addition to the research aspect, my project features a prominent creative element in the form of my own screenplay for a feature film entitled Solita. The back half of my project will be focused on examining my screenplay's main influences and discussion the creative process that was used to produce it. By writing my own screenplay, I am able to definitively say that pursuing a career as a Hollywood screenwriter is definitely worth it, despite any and all challenges that should come with it. Nobody ever said that being a writer was easy.

**Dill-Blake, Za'nae, A'sia Payne, Chris Brady, and Brierra Woods:**

Dr. Tamarah Smith

School of Humanities and Social Sciences

"Mental Health in the Academic Setting"

The purpose of this study was to examine mental health in an academic setting. We examined three areas related to student mental health: 1) stressors in the college setting and the impact on mental health; 2) how an individual's outlook and familiarity with mindfulness affects their mental health, life satisfaction, and school performance; and, 3) how the experience of mental health may be expressed differently among different races or ethnicities. Data were collected from undergraduate students completing the psychology research pool using an omnibus survey

**Gallagher, Cassidy, Dan Junttonen, Shaelyn Halter, Brianna Morton, and Nicole Holland:**

Dr. Tamarah Smith

School of Humanities and Social Sciences

"Impact of Sleep on College Students"

We explored the importance of sleep in college students from different perspectives. According to the National College Health Assessment of 2018, 21.8% of students report that sleep difficulties affect their individual academic performance. In order for college students to function at their best, they should get 8.5-9.5 hours a night. Studies show that 74.3% of students surveyed report that their universities do not provide information of how to address sleep difficulties for college students. We collected data by surveying undergraduate college students from Cabrini University who were enrolled in a psychology class. Our hypotheses explored college students' level of knowledge regarding sleep, and how sleep affects mental health and academic performance.

**Goodridge, Ryan, Taylor McCoy, Nathan Presnell, Miranda Smith, and Shenell Vines:**

Dr. Erin McLaughlin and Ann D. Servey

Engagements with the Common Good

"Money, Money, Money: Financial Literacy for College Students"

The purpose of the presentation is to empower students to make better financial decisions and become financially independent. Financial literacy is an important life skill. A strong foundation in financial literacy translates to financial success in life.

The presentation will provide information and guidance on important financial topics for college students. The information at the workshop will include key concepts, how to manage credit and debt, spending and saving, taxes, insurance, banking, and setting financial goals. Knowledge will enable students to make effective financial decisions throughout their lives.

**Hladky, Olenka, Anne Gorski, Natalie Wharton, and Sam Scelisi:**

Dr. Tamarah Smith

School of Humanities and Social Sciences

"Daily Stressors in Undergraduate Life"

There is a constant quest to determine why high academic achievement is not universal for all. A common explanation for this is everyday stress. Over 50% of students have reported experiencing above average stress levels. Everyday stress is typically understood as demands from within an individual or their surrounding environments that become overwhelming. However, this broad experience can be narrowed down to being caused by a handful of common stressors. This study used survey methodology to examine specific stressors and their prevalence among undergraduate students at Cabrini University. Some of the stressors included eating and exercise, finances, relationships, social life, and academic demands.



**Kelly, Lisa, Theresa Gillespie, Keairah Wright, Maimouna Coulibaly, Danielle Pasqua, Emily Murdock, Nick LaBanca, and Kayla Ricker:**

Dr. Tamarah Smith

School of Humanities and Social Sciences

"Bias Between Genders in The Education System: Unspoken Differences"

In recent studies favoritism and gender bias shown by an instructor have been identified by students as early as pre-school aged. This bias negatively impacts students. Our study examined the effects of gender bias by an instructor on students' sense of belonging, effort, and overall student engagement in a classroom setting. The research experiment was carried out in laboratory classroom sessions. During the sessions, 30 multiple choice questions were asked and students provided answers; however, the instructor targeted a specific gender by calling on either males or females exclusively. At the end of each session a survey was given to examine students' effort during the session, engagement, and sense of belonging.

**Kuryluk, Alyssa, Christopher Brady, Briana Cappelli, Kasandra Castillo, Samar Dahleh, Alexis Goldstein, Lyndsey Guarino, Vince Long, Sarah Matoney, Anna Russo, Grace Simms, Julia Smith, Mignon Toppino, Jenna Velez, and Natalie Wharton:**

Dr. Katie Farina & Dr. Jennifer Bulcock

School of Humanities and Social Sciences

"Breaking Down the Walls: Learning Inside a Correctional Facility"

Panel participants are members of the Inside-Out Prison Exchange Program, which takes place at Montgomery County Correctional Facility (MCCF) with women who are currently incarcerated. The content of the panel has been prepared in consultation with inside students (women incarcerated at MCCF) and is meant to represent the perspectives, experiences, thoughts, and feelings of both inside and outside (Cabrini) students. Over the course of the semester, students have met weekly to discuss issues of crime, justice, ethics, and inequality. Expected topics for the panel discussion include: the classroom experience inside a county jail; forming relationships in a nontraditional classroom setting; and participating in an experiential learning environment.

**Mason, Aailyah, Susan Ellis, Betsy Czarkowki, and Ottira Fontaine:**

Dr. Tamarah Smith

School of Humanities and Social Sciences

"Stress Among College Students"

According to the American Psychological Association (2018) stress is an uncomfortable emotional experience. Stress is your body's way of responding to demands whether it stems from a good or bad experience. College students endure different levels of stress from acute to chronic. In this presentation we will discuss different levels of stress among different groups of students such as athletes, first year students, and African American students.

**McColgan, Taylor, Briana Wormly, Justin Barbuto, and Donovan Szczukowski:**

Dr. Tamarah Smith

School of Humanities and Social Sciences

"The Real Coping Mechanism Used Today by College Students: How Stress Leads to Greater Alcohol Consumption"

College stress is undoubtedly a common issue. About 80% of college students report feeling stressed on a regular basis (ADAA, 2015). Poor habits coping with stress also exists among undergraduates. For example, in 2007 a study was done and showed that 36% of females and 49% of males report that they drink about 5 or more drinks in a sitting span of 2 weeks (Amaro et al., 2010). This study focuses on

alcohol and how it is used as a coping mechanism to relieve the experience of stress. A sample of undergraduate students was gathered from Cabrini University. They completed a survey related to many different aspects of stress, effects of stress, the use of alcohol, and its consequences to the student. The study sought to analyze how college students engage in regular alcohol use compared with their levels of stress, and the ultimate impact of this on their mental health.

**Medina, Milarys:**

Dr. Seth Frechie

School of Humanities and Social Sciences

"Gender Roles Throughout the Eras"

This senior capstone project explores the impact of gender roles in different historical periods and contexts. I also discuss how our understanding of gender roles has evolved over time.(e.g., how gender conceptions have changed from the early to modern eras). My work also looks at the different ways ideas about gender have impacted different writers. My oral presentation will focus on and reflect upon the importance of gender roles in novels and discuss how ideas about gender exert influence in society and vice versa.

**Parson, Monica, Ashley Torres and Nick Tilley:**

Dr. Tamarah Smith

School of Humanities and Social Sciences

"The Unconscious Effect of Bias on Students from Various Backgrounds"

Teacher and student interactions are crucial for a beneficial learning experience. Specific groups, such as students of color, students from low income backgrounds, and students with learning disabilities are at a higher risk of unequal treatment in the classroom. Students from these groups often have to deal with a bias in the classroom and the subject being taught. In this study, a series of laboratory experiments in a classroom design were performed in order to observe the effects of a teacher's bias towards males and females. Teacher feedback was key to the experiments. They provided bias in a systematic way by responding differently to males or females depending on the condition for that session. Post surveys were distributed and focused on the student's ratings on classroom engagement and belonging. Results will be presented for three specific groups: African American students, students from low income backgrounds, and students with learning disabilities

**Pisker, Julia, Araceli Lopez and Katelyn Heck:**

Dr. Tamarah Smith

School of Humanities and Social Sciences

"Female Classroom Bias: Implications for Male Dominated Fields"

Historically, women have been put at a disadvantage for the sole purpose of being a woman. Western societies have given men the opportunities to work in the STEM field therefore dominating these specific jobs. Stereotypes of women such as the beliefs that women are worse at math, or that women are not capable of more than domestic jobs belittle women in the education system. The interactions between women and their teachers influence their sense of purpose inside and outside of the school setting. For example, stereotyped classroom interactions may discourage female students and make them feel a lower sense of belonging in the classroom. We ran an experiment with undergraduate students from Cabrini University. Students were assigned to three conditions in a classroom setting. In each condition, male and female instructors asked the students 30 questions. Unaware to the students, the instructors focused on calling on a specific gender during the session for answers. We examine the effect this had on female students and will discuss the implications of these effects for different disciplines.

**Pottorff, Peter Joseph:**

Dr. John Cordes

School of Business, Arts, and Media

"The Corollary Effects of the Satanic Panic on Dungeons and Dragons --1978 to Present"

This pilot study examines the use of the Dungeon and Dragons. The literature on this subject mainly focuses on the psychology and application of roleplaying games and it was conducted from the mid-eighties to the late nineties with little published in the contemporary era. A convenience sample utilizing a social media platform and a convenience sample of players of Dungeons and Dragons from a Dungeon and Dragons web community were developed. Surveys and interviews were administered. And the Player's Handbooks from Basic Dungeons and Dragons to the Fifth Edition and various articles from Dragon Magazine were reviewed. Correlations between the Satanic Panic that occurred from 1978 to 1988, and the changes in the editions of Dungeons and Dragons are being analyzed as possible long-term effects. My hypothesis is if there is any correlation between the changes in the editions caused by the Satanic Panic they will be minimal at best. One limitation of this study is finding secondary data from thirty plus years ago. Final results will be available at the April Symposium.

**Purnell, Malachi:**

Dr. Raquel Atena Green

School of Humanities and Social Sciences

"Los factores incitadores que estimulan la inmigración hispana al Estados Unidos / Push Factors Stimulating Hispanic Immigration to the United States"

Immigration from Latin America dominates contemporary political discourse in the United States. However, the negative rhetoric used in said discussions reflects a lack of understanding of the factors motivating groups to leave their place of origin. This presentation is the result of independent research, personal accounts collected from individuals during a recent visit to Guatemala, and testimonies given by Cabrini students in a panel on immigration. In order to accurately frame this complex topic, this paper explains the various push factors motivating large numbers of Latin Americans to risk their lives to come to the United States. An objective of this paper is to carefully consider the role the United States has played in Central America, particularly in the case of Guatemala, and the responsibility it has for the development of push factors that continue to drive people away with a hope of a better life far away from their homeland. This presentation will be delivered in Spanish

**Sulpizio, Kristen, Zaraya Tollerson-Irby, Alex Sanchez, and Amber Collins:**

Dr. Tamarah Smith

School of Humanities and Social Sciences

"The Role of Instructor Gender in Classroom Bias, Student Belonging, and Student Engagement"

There are many factors that can have an impact on the engagement of students in a learning environment including teacher-student relationships, student-student relationships, and teaching of social and emotional competencies (Yung & Bear, 2018). Research shows that all three of these factors are significantly associated with student classroom engagement (Yung & Bear, 2018). Among the teacher-student relationship is potential gender bias that the teacher may hold towards students. Such bias has a negative effect on students' participation throughout a course (Herbert, Cheng, and Martin, 2008). We examined if this type of bias differed based on the instructor's gender. Data were collected from undergraduate students who were Psychology majors, or enrolled in Psychology courses and required to participate in the Psychology Research Participation Pool. They received course credit for participating. Students were placed in a session with one of three conditions: male bias instructor, female bias instructor, or control. Gender of instructor also varied. During the session, the instructor held a question and answer session with the students that included thirty multiple choice questions. The

instructor called on either females or males to determine the effect of this bias. Post surveys measured classroom engagement and belonging.

**Wattles, Schyler:**

Dr. John Cordes

School of Business, Arts, and Media

"Battling the Opioid Epidemic"

This study will be looking at the Opioid Epidemic in and around the Philadelphia area, and how to eradicate this issue all together. I will be conducting two research methods during this study, one being a survey and the other being a focus group. The survey will be handed out to various classes and students around the Cabrini University campus and the focus group will be conducted with a group of men at a sober living facility. The purpose of this study is to obtain the knowledge base that individuals have surrounding Opioid use and the epidemic this area is facing. I feel this is extremely important because it is a current issue that not only Philadelphia, but the whole country is facing. This study will help determine the knowledge around the epidemic as well as unveil underlying causes that can be helpful in eliminate the issue at hand. Results will be available for the Symposium.

## **Undergraduate Poster Presentations**

### **Abreu, Yalimet:**

Dr. Anthony Tomasco

School of Humanities and Social Sciences

"Neurological Factors Underlying Depression"

Depressive disorder is a common psychiatric disease that causes significant impairment in social and occupational functioning. Throughout the world it is said that about 350 million people of all ages suffer from depression, being twice more likely in middle-aged women with low income levels. Some of the symptoms are extreme sadness, loss of interest in social activities, thoughts about death or suicide, insomnia, fatigue and deterioration of concentration. I will explore some of the current research relating to diagnosis and treatment of this disorder.

### **Adefarati, Oluwademilade:**

Dr. Melissa Terlecki

School of Humanities and Social Sciences

"The Effects of Instruction and Maturity on Metacognition: Part 2"

Metacognition, or self-awareness, is important for many facets of life including academic achievement. A longitudinal study of seven hundred and forty-five undergraduates measured the effectiveness of direct metacognitive pedagogy. Pre and post-assessments of metacognition using the Metacognitive Awareness Inventory (MAI), before and after direct pedagogical instruction or indirect content, were compared between students enrolled in Metacognition, Laboratory Experiences in Cognition, and Introduction to Psychology courses. Likewise, freshmen and seniors were compared as self-awareness tends to increase with maturity. Although upperclassmen had higher, overall levels of metacognition, students taking part in direct instruction (Metacognition course) yielded the greatest improvements over time. Thus, metacognitive instruction may have impacts above and beyond the effects of natural cognitive growth and development.

### **Allen, Shamiah:**

Dr. John Cordes

School of Business, Arts, and Media

"Does Instagram Cause Individuals to Develop a Negative Body Image"

This pilot study researches how body image may be impacted by the pictures and text posted on the social media platform Instagram. My research question is: "Does use of Instagram correlate with a negative body image?" My hypothesis is that social media is a toxic mirror with postings having a strong impact on body image. This topic is important because it relates to the health and happiness of many people around the world. A ten-question survey will be administered to a convenience sample that will collect data on self-confidence, fake advertising by celebrities and influencers, and knowledge of Body Dysmorphic Disorder. Results will be available for the annual Symposium.

### **Awuah, Afua:**

Dr. Anna C. Blice-Blum

School of Natural Sciences and Allied Health

"Sickle Cell Anemia, a monogenic hereditary disease treatable with CRISPR method"

Sickle cell anemia, also known as sickle cell disease (SCD), is an inherited, autosomal recessive disorder caused by a mutation in the  $\beta$ -globin gene. The mutation severely affects the way RBC's react under stressful conditions. SCD affects about 100,000 Americans each year but is most commonly seen in

people of African descent due to the gene variant that arose, causing resistance to malaria. Some of the symptoms of SCD include vaso occlusion, when blood cells clog the blood vessels blocking blood flow. Other symptoms include painful swelling of the hands and feet, anemia, and jaundice. Although there is no cure for SCD, researchers are currently exploring a genome-editing tool called CRISPR-Cas9, which allows for the removal of undesired genes. Although CRISPR-Cas9 has not been used in humans, there have been many experiments conducted on mice and monkeys that have shown the successful removal of genes to restore their function. In a study conducted to convert abnormal hemoglobin to unmutated hemoglobin, researchers used CRISPR-Cas9 to remove the mutation in the beta globin chain, and then placed the cells in a mouse embryo. After allowing the mice to grow, they removed RBC's from the mouse and subjected them to a sickling assay, which allowed researchers to see if the cells would sickle under stressful conditions. CRISPR-Cas9 was successfully used to edit the DNA sequence that contained the mutation. All in all, the CRISPR approach is proving to edit genomes of various animal models, and will soon edit the greatest project of all, the human genome.

**Awuah, Afua:**

Dr. Vinayak Mathur

School of Natural Sciences and Allied Health

"An analysis to identify genes that control temperate and lytic lifecycles in Bacteriophages"

Bacteriophages are amongst the most diverse organisms found on Earth and these organisms infect bacteria, eventually killing them. Mycobacterium phage Ramsey is a bacteriophage that infects Mycobacterium smegmatis, a Gram-Positive bacteria known to have high GC and low AT content. This phage has 58578bp and is characterized as a temperate phage. Similar to this bacteriophage is another M. smegmatis phage called phage Chill, which has 64529bp and is characterized as a lytic phage. Although both phages infect the same bacteria, they have very different characteristics in terms of their cluster life cycle. The purpose of this experiment was to use the bioinformatics tools DNA master, Phagesdb, and HHpred to understand the characteristics of the two phages by comparing their coding and non-coding regions in the genome. I also analyzed similar phages in the same cluster to identify conserved genomic regions and attempted to match the results to the respective life cycle characteristics of the phages under study.

**Ayer, Danielle:**

Dr. Sheryl Fuller-Espie

School of Natural Sciences and Allied Health

"Examination of the Efficacy, Safety, and Mechanism of Action of Abatacept in the Treatment of Rheumatoid Arthritis"

The focus of this literature review is to explore the autoimmune disease rheumatoid arthritis (RA). RA affects the joints of an affected individual due to immunological cells attacking the cartilage that line the joints. More specifically this review focuses on the medication known as abatacept and how it works in combating the disease. Abatacept is a CTLA4-IG fusion protein and is a biological medication. The efficacy, safety, and ability of abatacept has been examined and it has been found that overall abatacept works to decrease disease activity with no major adverse events. When looking specifically at how abatacept affects T cells it was found that it has a suppressive effect. This was seen in the CD4+ T cells which had a LAG3+ like functionality. In clinical trials it was seen that abatacept was just as efficient as other medications used to treat RA on the market. Also, when it came to the possibility of drug free remission treatment, abatacept was more likely compared to other drugs. The treatments that included abatacept only or a combination of abatacept and methotrexate had a higher remission rate; remission rates were reported as 28% for abatacept and 25% for abatacept plus methotrexate treatments compared to 17% with methotrexate only treatment. This draws a connection from the way abatacept

affects the T cells specifically while methotrexate is a wide range treatment. The more specific treatment type allows for tighter control on effector cells of RA pathogenesis leading to a highly effective type of treatment.

**Banks, Jamie:**

Dr. Maria Elena Hallion

Engagements with the Common Good

"The Relationship between screen time and childhood obesity"

Thirty-six percent of children ages six to seventeen are overweight, including thirteen percent who are obese. Research has determined that factors such as fast food, opportunities for physical activity, food advertising, and screen time have contributed to the rapid increase in childhood obesity rates. Screen time is defined as the time spent on computers, television, and mobile devices. Screen time has been displacing physical activity, increasing calorie intake from eating while viewing, and reducing sleep. Among all the media exposure, computer time accounts for up to 1.5 hours per day and half of this time in social networking, playing games, or viewing videos. As a result of the advances in technology, the American Academy of Pediatrics had to modify their screen time recommendations.

**Basile, Lauren:**

Dr. John Cordes

School of Business, Arts, and Media

"Beauty"

This pilot study will examine the role of and how beauty affects and is affected by society and individuals. Each year there are new beauty trends that may not fit all. Research has shown that younger generations have looked up to influencers and have made drastic measures to look like the influencers. Research has also shown the rates have increase for cosmetic and plastic surgery. Data will be collected from a convenience sample of students, men, and women from all ages. Participants will complete a ten-minute survey on Survey Monkey posted to social media platforms.

**Bauer, Anna, and Sophia Scarpone:**

Dr. Sheryl Fuller-Espie

School of Natural Sciences and Allied Health

"Use of a modified tube dilution method to determine bacterial susceptibility to antimicrobial proteins from *Eisenia hortensis*"

The objective of this investigation was to use a broth-based method to determine the concentration of an antimicrobial protein extract purified from the earthworm *Eisenia hortensis* required to inhibit selected bacteria. Protein extracts were prepared using 85% ammonium sulfate precipitation, dialysis, filtration and concentration techniques. This experiment investigated the bacteria *Bacillus megaterium* and *Micrococcus luteus*. A tube dilution method was developed to address the concentration of extract required to inhibit growth in liquid culture. Overnight tryptic soy broth cultures of bacteria were diluted 1:20 and incubated with three concentrations of extract (0.82, 0.082, and 0.0082 mg/ml) for 16-24 hours. The number of colony forming units (CFUs)/ml for treated and untreated control samples was determined by preparing ten-fold serial dilutions made in phosphate-buffered saline and plating on tryptic soy agar in the absence of extract to permit recovery of bacteria. *M. luteus* was tested in two separate assays with all treatments in duplicate. Statistically significant ( $p < 0.05$ ) decreases in CFUs/ml were observed for *M. luteus* treated with 0.82 and 0.082 mg/ml, but not with 0.0082 mg/ml compared to untreated controls. Preliminary results show that *Bacillus megaterium* is less sensitive to the extract than *M. luteus*, with significant inhibition observed at 0.82 but not 0.082 mg/ml. Experiments are

underway to confirm the results observed with *B. megaterium* and to include *Micrococcus roseus* in the scope of this study.

**Bauer, Anna, Riddhiben Parmar and Thomas Ramsbergson:**

Dr. Sheryl Fuller-Espie

School of Natural Sciences and Allied Health

"Oculocutaneous Albinism"

This poster displays the research on the genetic disorder known as Oculocutaneous Albinism. Albinism is a recessive, autosomal disorder found on various chromosomes. The phenotypic traits of the disorder include the common appearance of white hair and skin and pale eyes. Albinism by itself is not deadly; however, those with the disorder are prone to skin or eye problems. Albinism is most commonly caused by a mutation of the TYR gene, but can be caused by mutations on other similar genes. This mutation of the TYR gene causes a decrease in the tyrosinase protein. In a recent study, the OCA1A and OCA1B mutants were studied by using larvae. The study was able to show that the mutations cause a decrease in tyrosinase enzymatic activity. In another study a whole albino family's genes were compared, and the study concluded that albinism is a missense mutation. Albinism is a rare disorder, but not fatal. It cannot be cured, however further research into melanin production could be done.

**Biche, Vincent:**

Dr. Anjuli Gairola

School of Natural Sciences and Allied Health

"Caffeine Effect on Athletic Performance and Blood Pressure"

Caffeine is a compound which acts as a stimulant on the central nervous system (CNS). Caffeine can also affect substrate utilization during exercise (Goldstein, 2010) In particular, research findings suggest that during exercise caffeine decreases reliance on glycogen utilization and increases dependence on free fatty acid mobilization (Goldstein, 2010). Caffeine has been shown to be most effective in improving sport specific skills while providing little to no improvement in laboratory tests(Goldstein, 2010). Caffeine also showed an increase in maximal exertion in reducing sprint times but was also shown to increase fatigue (Glaister, 2008). When pertaining to blood pressure (BP) caffeine showed to raise BP after acute intake while results on the long-term effects of consuming caffeine on BP remain inconclusive (Nurminen, 1999).

**Billig, Trisha, Angela Riviuccio and De'Aja Gordon:**

Ms. Cindy Ross

Engagements with the Common Good

"Trafficking with Disabilities"

Anyone can be trafficked but individuals with disabilities have greater risk than those who do not. These disabilities can be physical, cognitive, or even emotional. A disability makes one more vulnerable and traffickers take advantage of them more than usual. These individuals get use to listening and learning from someone else and will listen to anything anyone says to them. This is because someone with a disability usually relies on someone else to help with basic needs. This could be every day activities, speech, or even craving friendship. When talking about disabilities many of these individuals have a level of touch and intimate care that they encounter. With the lack of information about crime and their rights gives them a disadvantage. People with disabilities are less likely to go to the police than someone else. This is because they may not be believed or trusted. For a trafficker this is exactly what they want. They want someone they can control. A person with a disability is someone they can control without getting them caught.



**Bono, Jessica:**

Dr. Crystal Anderson

Engagements with the Common Good

"Centro Cultural Latinos Unidos: Latinx Community Making a Difference in Families' Lives"

The specific purpose behind this presentation is to gain a deeper knowledge of Latinx culture and the various organizations helping them within their community. Communities, such as this organization, give support to Latinx families like taking them to a doctor appointment, and going to get their license. The organization gave me a look at how Latinx families, especially the children, are given resources to thrive within the education system. They are given time to enjoy a music class, they are given extra help in subjects that may be too difficult. By the end of the presentation, our main goal is to have the audience understand what they can do to help the Latinx families within this organization. Also, give the audience a view into how Latinx families are being served and are being given the help. This is important because there are people of that culture that do not have the same choices or options of people of a different culture. There are many bias labels for Latinx groups and it is what makes it extremely hard for them to get a job or a good education. However, with organizations such Centro Cultural Latinos Unidos and the wonderful people, for example Rita Paez, who run the organization, it gives Latinx families a voice within their community.

**Brady, Christopher James, and Griffin Shira:**

Dr. Anthony Tomasco

School of Humanities and Social Sciences

"Insights into Fasting as A Way of Improving Cognitive Function and Health"

Much has been written about the deleterious effects of food abstinence and other abnormal dietary habits. The purpose of this research is to discuss the possible positive benefits of controlled fasting and abstinence. Specifically, we will report on the research suggesting possible health benefits resulting from controlled abstinence such as improved cognitive function and the reduction of risk factors associated with coronary artery disease, diabetes and neurodegenerative disorders.

**Cabrera Vicens, Brenda:**

Dr. Anna C. Blice-Blum

School of Natural Sciences and Allied Health

"Understanding the current diagnosing procedure, treatment options, and therapeutic management for venous thromboembolism: Advances in prophylaxis and mechanisms of action"

Venous thromboembolism (VTE) is a silent killer. VTE is a condition where a blood clot abnormally forms in the deep veins of the body, known as deep vein thrombosis (DVT), and if it detaches from its origin and travels, it can lead to a circulation problem in the lungs, known as pulmonary embolism (PE). Signs of VTE are common signs of other illnesses, which leads to a difficult diagnosis. Currently, VTE is diagnosed by the Well's Criteria, D-Dimer test, and some venography methods, but all cannot be done at the same time, which leads to the necessity of developing an adequate treatment and management assay. The current diagnosing procedure for VTE is not working for many patients as either VTE goes undiagnosed or is misdiagnosed. Two current research methods aiming to prevent and treat VTE is safflower injections and zifaxaban, a new factor Xa inhibitor. Safflower injections have been approved in China to improve circulation, but more experiments are necessary to be approved here. After testing seven different injections, scientists were able to isolate an active component that increases clotting time, which can provide therapeutic effects to treat VTE. Zifaxaban is a new therapeutic drug aiming to improve possible side effects when compared to rivaroxaban, which is currently in the market. After a pre-clinical pharmacodynamic study, zifaxaban shows significant therapeutic effects when compared to

rivaroxaban. Overall, there is a positive outlook for future prophylaxis for VTE, including new therapeutics and management assays.

**Cavaliere, Samantha, and Estefany Perez:**

Dr. Maria Elena Hallion

Engagements with the Common Good

"The Physical and Mental Consequences of Childhood Obesity"

The Center for Disease Control and Prevention (CDC) states that approximately 1 in 5 children and adolescents aged from 6 to 19 fall into the parameters of being obese in the United States. The number of school age children whom fall into the categories of overweight or obese, however, have not always been this high. In the last two decades, there has been an increase of 114% in the number of children who are overweight in the United States; from 7% to 15%. The consequences and implications of childhood obesity include both physical and mental effects. Obese and overweight children face a dramatic increase in the risk of future health problems such as high blood pressure/cholesterol (risk factors for cardiovascular disease), type 2 diabetes, joint problems and fatty liver disease. These children and adolescents are also put at risk for psychological issues (anxiety, depression, etc.), lowered self-esteem and "quality of life", due to not only their weight but from bullying and social stigmas. It is found that major depressive disorders have been diagnosed in 2% of children (12 and under) and 4-8% of adolescents (13 and older), while the rates for children whom have a dual diagnosis of obesity and depression are higher.

**Chamberlain, Steven Tyler:**

Dr. Vivian C. Smith

School of Humanities and Social Sciences

"The Effects of Methadone Treatment on Heroin Users"

Methadone treatment offers the most efficient treatment design in helping break the cycle of addiction. Approximately 65% of heroin addicts will face at least one relapse within the first three months of their recovery (Ansari, Moghaddam, Mohammadi, Mahdavifar, 2018). Treating heroin addiction efficiently is especially difficult because it is anything but a one dimensional problem. Treatment must take into consideration many factors, such as: relapse, diseases like HIV and mental illness (Shai et. al, 2014). This research will examine methadone treatment programs to understand its effects on recovery. The data comes from TEDS-A/ TEDS-D, which comes from The Inter-University Consortium for Political and Science Research (ICPSR 34876 and 35074). It provides annual data on the number and characteristics of persons admitted and discharged to and from public and private substance abuse treatment programs that receive public funding. The total number of participants is N=344,158. Secondary data analysis will be performed to determine the results. The findings from this research can provide policy makers a proper perspective on the effects of methadone treatment on the recovery process.

**Chandler, Kyle, and Ashley Greenhalgh-Sharpe:**

Dr. Sheryl Fuller-Espie

School of Natural Sciences and Allied Health

"Alzheimer's Disease as a Genetic Disorder"

The purpose of this research was to study and understand the genetic disorder of Alzheimer's disease. Alzheimer's disease is a genetic disorder that primarily affects people of the age of 65. Alzheimer's disease is not a sex-linked disease. It is related to chromosomes 1,14,19, and 21. This disease is the most common form of Dementia. Alzheimer's disease makes the everyday life of a person and their

caretakers' life a challenge. They face struggles with memory loss, planning and solving problems, trouble understanding visual images, decreased judgement, and so much more. The gene that controls Alzheimer's is the E(APOE) allele. When a person carries more than one allele their chance for developing Alzheimer's disease increases compared to a person that does not carry more than one allele. There are different types of Alzheimer's disease. Early-onset Alzheimer's disease occurs before the age of 65. The symptoms typically develop well before that. Late-onset Alzheimer's disease occurs after the age of 65. This is the most common type of Alzheimer's. Scientist wanted to test whether or not if hepatic amyloid beta ( $A\beta$ ) degradation occurred in patients with Alzheimer's disease. The results concluded that it may be possible that Alzheimer's leads to  $A\beta$  metabolism deficiencies in their liver. They also wanted to study the effects that patients with Alzheimer's had on their caretakers. They noticed that the functional ability of the patient does not lead to reduced quality of life.

**Chiriaco-Sousa, Natalia, and Tajamier Smith:**

Dr. Crystal Anderson

School of Education

"The Association between Spanish-speaking Students and Achievement Gaps within the Education System"

As pre-service educators, Tajamier and I, are dedicated to understanding and recognizing certain areas of growth within the education system. We are also dedicated to informing ourselves on different cultural backgrounds in order to advance our relationship with our future students. It is important for educators, as well as institutions to accommodate all their students and make their learning experience comfortable and efficient. While taking Educational Experiences of Latino Students, Tajamier and I have noticed different issues within the Hispanic and Latinx population. One of which regards their education and their language. Overall, we have sought to explore and understand the importance their culture has on the education system. Thus, our project relates to the association between Spanish-speaking students and their achievement gaps within the education system. When we mention achievement gaps, we are studying their performances on certain assessments, overall grades, graduation rates, etc. and comparing these statistics and scores between other racial groups and gender. To emerge ourselves and to conduct our research properly, we are visiting Eisenhower Science and Technology Leadership Academy. ESTLA goes from fifth to eighth grade and is situated in the Norristown Area School District. Overall, this middle school has a high population of Hispanic and Latinx students. While there, Tajamier and I will be meeting with Vice Principal Joseph Rodriguez and exploring their after-school tutor program.

**Cross, Tyler:**

Dr. Maria Elena Hallion

Engagements with the Common Good

"The Effects of Screen Time on Childhood Obesity Rates"

In the United States, the percentage of children and adolescents affected by obesity has more than tripled since the 1970s. Screen time plays a huge role in childhood obesity. Screen time can be defined as the amount of time that, in particular, a child, spends on a screen, such as watching television, playing video games, watching videos, or doing some sort of activity on a television or tablet. Every day, children are sitting in front of the television or on their phones/tablets watching movies or playing games. While this is going on, they are typically snacking on something and they are not paying attention to how much food they are consuming. Years ago, children would go outside to play after doing homework, participating in some sort of physical activity. Many children are now taking part in little to no physical activity, resulting in major weight gain. Some children beg their parents for the newest video game then

give up valuable outside play time. A child spends at least 3 hours a day on a screen. Watching TV can be relaxing but it has to be balanced with other healthy habits.

**Curran, Michael, and Kyriaki Gerasimidis:**

Dr. Vinayak Mathur

School of Natural Sciences and Allied Health

"Annotation of a Cluster E Phage"

Bacteriophages are viruses that possess the ability to infect and replicate within bacteria. Trillions of these specialized viruses naturally thrive in every biosphere of the planet. Research involving bacteriophages is essential because these viral organisms have many abilities which allow them to be used in medicine as antimicrobials to treat infections. The detailed investigation of gene functions and annotation of genomes provides a level of standardization necessary for communication within and across bioscience fields, and for understanding these genomes. To understand the practical application of genome annotation techniques, we annotated the genome of a bacteriophage isolated with a Microbacterium host. The genome of phage Schubert from the EA8 sub-cluster was annotated using DNA Master annotation software. We utilized Glimmer which analyzes the coding potential of open reading frames, GeneMark which analyzes potential ribosome binding sites, and Phamerator which creates a graphical genome map and identifies gene families and orphans. In addition, potential tRNA and tmRNA genes were predicted. Results will be available at the symposium.

**Devenney, Deanna:**

Dr. Maria Elena Hallion

Engagements with the Common Good

"Food Advertisement & The Effects it Has on Childhood Obesity"

In the United States alone, the percentage of children and adolescents that are affected by obesity has more than tripled since the 1970's, affecting about 18.5% of children and adolescents. It has become a growing epidemic that must be addressed. The increasing rates are due to many factors like screen time, lack of opportunity for physical activity, and food advertising. Food advertisements, specifically directed to children for unhealthy foods, that are seen on television and social media, significantly contributes to the increase in overweight children. Studies indicate that children have a remarkable ability to recall the content from advertisements, and how product preferences can occur after a single exposure to an advertisement. As this is an increasing epidemic, parents can take steps to help reduce the effect of the advertisements; these include limiting screen time, having healthy dinners around the table, and speaking with the child about what they see in the ads.

**DiCave, Michael:**

Dr. Maria Elena Hallion

Engagements with the Common Good

"The Relationship between sleep issues and Childhood Obesity"

Over the past 30 years the rate of childhood obesity has continued to increase at alarming numbers leaving children vulnerable to poor health. According to the Center for Disease Control and Prevention childhood obesity has touched as many as 13.7 million children in the United States for an overall percentage of 18.5. Obesity for children and adolescents is defined as a body mass index (BMI) at or above the 95th percentile. A key contributing factor to the rise of childhood obesity is poor sleep patterns among children themselves. Poor sleep in children can also leave them at risk for a various health issues such as heart disease, type II diabetes, and high blood pressure. Recent research has shown that obesity in children can lead to sleep apnea which is a serious sleep disorder in which breathing repeatedly starts and stops during sleep.

**Dotson, Sierra, Nuresebah Alkadir, Ashley Batista, James Bradley, Richard Coleman, Casey Collins, Ryan Cutter, Sierra Dotson, Brendon Fisher, Mary Anna Gatta, Giancarlo Gomes, Justin Henry, Mack McKisson, Brahk Morrison, Colton Padgett, Mia Prater, Jessica Redding, Lisa Reimann, Alsmith Saintilus, Britney St. Hilaire, Ramsbergson Thomas, Evan Trizonis, Rhys Vaughn, and Anthony Zampirri:**

Catherine Pressimone Beckowski

Engagements with the Common Good

"HopeWorx: Advocacy Through Storytelling"

A movement in mental health advocacy has shone a spotlight on the value of digital storytelling in raising awareness about and challenging stigma against mental illness. Storytelling can also help encourage individuals to seek treatment and support for their own mental health. Students from ECG 200: HopeWorx: Advocacy and Empowerment in Montgomery County have created a series of advocacy videos in partnership with members from the HopeWorx staff, who share their stories in order to encourage a greater understanding of mental health. In this presentation, students will present their videos as they discuss their experience of working with their partner from HopeWorx in order to engage in advocacy through digital storytelling.

**Dougherty, Jimmy:**

Dr. Anthony Tomasco

School of Humanities and Social Sciences

"Neurological Factors Associated with Alzheimer's Dementia"

Alzheimer's is a specific form of dementia, which causes memory loss and other cognitive disadvantages severe enough to make daily life a challenge. While Alzheimer's may only be one form of dementia, the disease accounts for 60 percent to 80 percent of all cases. Being a neurodegenerative disease, Alzheimer's is caused by the rapid death of brain cells, which overtime leads to a continuous decline in thinking, behavior, and other social interactions. This disease is also accompanied by the inability to form new memories, impaired visuospatial abilities, and changes in behavior. The purpose of my research is to analyze and identify the factors behind the causation of Alzheimer's and how those living with the degenerative disease can aid themselves. While there are no possible cures or medication one can take to slow the rapid decline that comes along with Alzheimer's, there are several treatments that could help lessen the symptoms and improve quality of life.

**Droege, Megan, Madelyn Murphy, Megan Marley, Kelly Sweeney, Deanna Sansone, Annalise Moreno, Anthony Frasca, Amy Alton, Rue Kennedy, Angelica Lara, Amanda Martin, Elaine Gregory, Matt Young, Kelly Barrett, Gianna Johnson, Amber Staudt, Paige King, Marissa Thomas, Raechel Aviles, Allison Martin, Kaitlyn Martin, Shannon Quinn, and Lauren Swint:**

Dr. Susan Jacques Pierson

School of Education

"Using Digital Tools to Help Teach Language Arts in Underserved Schools"

The digital divide refers to differences in access to the information, services and benefits of technology between those who have access and those who do not. Those affected by the digital divide include children who attend school in economically disadvantaged areas where educational technology is not readily available. Lack of access to digital tools for learning can have negative effects on student motivation and achievement. As a Learning Community, Educators for Change, we have committed ourselves to seeking ways to advance social justice through education. Providing more equitable access to technology is an important part of that effort.

We have learned ways to create appealing digital tools for our students and to share them via cell phones in places where computers and tablets are unavailable. Members of our group will share poetry

reference guides we created for young students and discuss the reaction of children who used them with us. We will also demonstrate the use of QR codes and online games as a means of infusing technology into language arts teaching.

**Finn, Shannon:**

Dr. John Cordes

School of Business, Arts, and Media

"Experiences Through Semester at Sea"

This pilot study will dive into the experiences of participants of the Semester at Sea study abroad program encountered throughout their time abroad. Some questions to be explored include the degree of experiencing different cultures, dress, and languages as well as how long it took them to readjust after returning from being abroad. The purpose of this study is to see if participants of the program have similar experiences throughout their time abroad, somewhat similar experiences, or not similar experiences at all. These questions were asked via Survey Monkey and a convenience sample in a Facebook group for Semester at Sea alumni. The results of this study will be presented April 30th at the annual Symposium.

**Furman, Jordan:**

Dr. Anna C. Blice-Blum

School of Natural Sciences and Allied Health

"The identification of decomposing or skeletal human remains using DNA phenotyping and facial reconstruction"

Biological samples found at a crime scene can be used to identify victims through means of DNA identification. DNA phenotyping and facial reconstruction can predict physical characteristics of decomposing or skeletal remains. Within the first study, the pigmentation gene SLC45A2 was examined from blood samples from 288 Brazilian individuals. 12 Single Nucleotide Polymorphisms (SNPs) were genotyped using PCR-RFLP and allele-specific PCR. The haplotypes were successfully genotyped from the SLC45A2 gene and was associated with the presence of freckles, eye, hair, and skin pigmentation. With the use of skeletal landmarks found on the skull, facial reconstruction is able to determine the tissue placement, age, and gender of the remains. The oral cavity was examined in another study by analyzing CBCT scans to examine linear distances and proportion differences of anatomical landmarks. By observing the differences between age groups and gender using 3D rendering of the bone tissues located to place the craniometric landmarks, the axial plane was reconstructed and compared. The Is-li values decreased as age increased and examined in ages 11-29 year was 2 mm smaller on average when compared to Asian subjects. The height of the vermillion border corresponded to 26% of the mouth width. Mouth width increased over time within men. The average intercanine distance and distance between the mentonian foramina was shown to attribute to width more in women than men. With the use of DNA phenotyping and facial reconstruction, human identification can be more accurate by determining physical features of remains and predicting more phenotype combinations.

**Galie, Kaylyn, and Mark Martin:**

Dr. Vinayak Mathur

School of Natural Sciences and Allied Health

"Isolation and characterization of complete genome sequence of Schubert phage"

A phage founded by Kerry Iles back in 2017 at University of Pittsburg called Schubert, named after Franz Schubert. It was isolated from an enriched soil sample from the organism, *Microbacterium foliorum* NRRL B-24224 SEA. It was completely sequenced in 2018 using Illumina sequencing. This bacteriophage has turbid plaques which indicates that it could also be lysogenic. The Schubert phage is categorized into

cluster EA meaning it infect host in the following genus of Microbacterium and a subcluster of EA8. As of now this is the only known phage that been placed in EA8. The genome length of Schubert is comprised of 38,820 base pairs long (61.4% GC) which encodes for a total of 56 genes. Many of the gene within Schubert are identified but 27 of the genes have an unknown function. Some of the known gene with known functions are major capsid protein (gene 7), lysin A (gene 24) and DNA polymerase I (gene 36). We focused our research in figuring out the functions of genes with unknown functions using Blastp and HHpred.

**Gerasimidis, Kyriaki, Naidelyn Rodriguez and Amy Parker:**

Dr. Sheryl Fuller-Espie

School of Natural Sciences and Allied Health

"Highlighting the biochemical characteristics of pasteurized and unpasteurized milk samples using coliform analysis with the methylene blue reductase test"

The microorganisms present in milk were analyzed and measured using two different experiments: The coliform analysis with a subsequent methylene blue reductase test. The purpose of performing the coliform analysis and methylene blue test was to examine the concentrations of pasteurized and unpasteurized of milk for the presence of bacteria. The coliform analysis was done by doing a plate count on a pasteurized and on an unpasteurized milk sample on violet red bile agar (VRBA). The goal was to determine and compare the sanitary quality or how sterile the pasteurized and unpasteurized milk were. The high count of coliforms indicates the presence of bacteria, which is proven because it was produced by unpasteurized milk. The results of the pasteurized milk were that no coliforms grew on any of the three plates of the concentrations of milk. This is because the milk has been pasteurized and processed in order to be made relatively bacteria-free. The methylene blue reductase test was done to determine the concentration of oxygen in samples of pasteurized and unpasteurized milk. The methylene blue dye (redox indicator) in the unpasteurized milk sample changed from blue to white after 8 hours of incubation. This resulted from the high number of bacteria found in the raw, unpasteurized milk causing an oxygen reduction. The pasteurized milk sample did not lose the methylene blue dye color during the 8-hour incubation, indicating a low bacterial concentration. This occurred because the unpasteurized milk contained many growing bacteria that lowered the oxygen concentration, which caused the blue dye (redox indicator) to lose its blue color in the anaerobic environment. The hypothesis was that the unpasteurized milk would have bacteria present while the pasteurized milk would not.

**Giovannello, Christina, and Sarah Matoney:**

Dr. Anthony Tomasco & Dr. Gordon

School of Humanities and Social Sciences

"Neurological, Behavior and Possible Personality Changes Resulting from Long Term Marijuana Use"

Recent legalization of Marijuana in many states throughout the country has led to greater use both recreationally and medicinally. Our research will examine the current literature on the neurological changes associated with Marijuana use. Also, as part of our research we will look for evidence indicating behavioral and possible personality changes resulting from long term use of cannabis.

**Gist, Neferteri:**

Dr. Sheryl Fuller-Espie

School of Natural Sciences and Allied Health

"Contributing Factors and Experimental Treatments to Decrease the Incidence of Necrotizing Enterocolitis (NEC)"

In this literary review, contributing factors and experimental treatments for necrotizing enterocolitis (NEC) are discussed. NEC is an inflammatory disease that causes infection in the small intestine and

colon, resulting in deterioration or destruction of the bowel wall. NEC occurs predominantly in premature infants that have a gestational age of about 34 weeks or less. It is estimated that NEC is associated with a mortality rate between 20 and 30%, with the highest rate among infants that undergo surgery. There are four key risk factors associated with NEC: infant prematurity, formula feeding, intestinal ischemia and bacterial colonization. Of these factors, bacterial colonization in the gut has been the dominate area of study. Abnormalities in an infant's microbiota has been correlated with dysbiosis, which by definition is the imbalance in bacterial composition in the gut, changes in bacterial metabolic activities, or a shift in bacterial distribution. Treatments other than surgery are still being reviewed because the exact mechanism of the pathogenesis of this disease remains unknown. Heida et al confirmed that early enteral nutrition after birth and breast milk play a pivotal role in protecting the intestine against developing NEC. In an experimental NEC mice model the administration of HMO-2'FL significantly reduced the severity of NEC as compared with mice that were administered NEC formula. In another study, exosomes secreted from bone marrow-derived mesenchymal stem cells (BM-MSCs) were found to protect the intestines from experimental NEC and preserve the integrity of the gut barrier.

**Gist, Neferteri:**

Dr. Vinayak Mathur

School of Natural Sciences and Allied Health

"Comparison of phages From Cluster EK and EK1 for Classification as Lytic or Temperate"

ArMaWen is a phage that was isolated from *Microbacterium foliorum* NRRL B-24224 SEA. There is a total of 1252 phages that have been isolated from this bacterium out of which 174 have been sequenced. ArMaWen has 53939 base pairs with a GC content of 59.9%, and a total of 54 genes present in its genome. Its cluster and sub-cluster group have been characterized as EK and EK1 respectively. There are six different phages that have been isolated from *M. foliorum* and are classified as members of the same cluster as ArMaWen which are: Alex44, LilyLou, TinyTimothy, Wesak, Akoni, and PhriedRice. I annotated the genome using various bioinformatics tools, such as DNA Master; Phamerator; HHpred and GeneMark to determine gene location and function. I then compared the genome of the seven phages within the cluster to identify unique features of each of them. Additionally, I observed the non-coding regions in the genome to determine if they influenced ArMaWen's function and compared the genes of phages from cluster EK and EK1 to determine if they are lytic or temperate phages.

**Haddad, Marc:**

Dr. Anna C. Blice-Blum

School of Natural Sciences and Allied Health

"The key roles pro-inflammatory cytokines play in periodontal disease accompanied by diabetes mellitus"

Periodontal disease is an infectious inflammatory disease that results in the destruction of periodontal tissue and the alveolar bone within the oral cavity. This progressive disease is caused by pathogenic microbial plaque residing on the enamel layer of the teeth. Infections that begin in the oral cavity are capable of traveling to the rest of the body through various blood vessels and nerve tissues. Oral bacterial infections have the ability of spreading to the circulatory and nervous system. The immune system releases biochemical mediators such as cytokines, prostaglandins, and matrix metalloproteinases to activate inflammatory responses. Cytokines play a significant role in the interactions resulting in inflammation and the immune system as they are used in cellular communication. They consist of small proteins that are produced by cells to regulate an immune response. Macrophage migration inhibitory factor (MIF) is a key regulatory cytokine within the immune response system capable of promoting and modulating the magnitude of the response. A research article conducted in 2019 resulted in significantly higher levels of MIF in the saliva of CP patients in comparison to their GCF and serum levels. Another



research article completed in 2018 linked the mediators of inflammation between diabetes mellitus and periodontal breakdown. The results showed a significant increase in tumor necrosis factor-alpha and IL-6 in the saliva and serum of diabetics compared with healthy individuals. An array of systemic diseases are linked to inflammatory responses such as; heart disease, cancer, diabetes, and much more.

**Hagan, Maria, and Gabe Cano:**

Dr. Chystal Anderson  
School of Education  
"Esperanza"

This project highlights the community needs of the Latino community and primarily focuses on Esperanza. Esperanza is an organization that has been dedicated to serving the Hispanic community in the Philadelphia area since 1987. Since 1987 the organization has grown but continues to serve the Hispanic community strive to reach their full potential.

**Haigh, Sydney:**

Dr. Sheryl Fuller-Espie  
School of Natural Sciences and Allied Health

"Dendritic Cell-Based Immunotherapy: A Novel and Effective Approach in Cancer Treatment"

Cancer immunotherapy treatments have become increasingly popular due to their ability to boost the body's immune system to fight autologous cancer cells. Immunotherapy can train the immune system to develop memory against cancer cells, which often results in longer-lasting remissions. Cancer immunotherapy is often more targeted than conventional cancer treatments such as chemotherapy or radiation, which are known to damage healthy cells. More specifically, dendritic cell (DC)-based immunotherapy has shown increased cytotoxic effects against tumor cells and proposes a promising method for cancer therapy. DCs are considered to be the most powerful antigen presenting cells to establish the necessary link between innate and adaptive immunity and can be loaded with various forms of antigens to elicit antigen specific immune responses. To further improve the immunogenicity of cancer vaccines, adjuvants are added to immunotherapies as they help in eliciting a potent immune response against the vaccine antigens. The use of a synthetic lipopeptide specifically targeting DCs, interferon- $\gamma$ , and cyclooxygenase inhibitor (COX2-I) in combination with DC immunotherapy showed effective therapeutic responses in mouse and canine tumor models and an increase in tumor-specific T cells. The use of a potent recall antigen, such as the tetanus/diphtheria toxoid, as an adjuvant in DC immunotherapy showed enhanced tumor loaded-DC migration to vaccine site-draining lymph nodes (VDLNs) as well as significantly improved overall survival in patients. DC immunotherapy should be utilized as a primary cancer treatment as the targeted cytotoxic effects often lead to successful clinical outcomes and treatment can be tailored specifically to patients.

**Hall-Goodman, Ayana:**

Ms. Cindy Ross  
Engagements with the Common Good  
"Financial Side of Human Trafficking"

I will be researching the financial side of human trafficking. What I will be trying to figure out is why families sell their children and why is child slave labor being used more. This is important because children shouldn't have to endure these type of treatments. The results as to why this is happening will be available at the symposium.

**Hock, Taylor:**

Dr. Darryl Mace

School of Humanities and Social Sciences

"The Rise and Fall of the Florentine House De Medici"

In this poster I will be covering several aspects of the De Medici family: who they were; how they rose to power; what they did with that power; what the women and their political marriages did for the rise in power the De Medici's gained; and how they fell from being the most prestigious and influential family in Florence. Through the help of several scholarly articles I will show how different authors and historians have portrayed the De Medici family throughout time and from different nations. All the results of this research are not yet available but so far it seems that the newer the article the more it focuses on the influence they had in Florence than anywhere else in the world. Most of the female authors also wrote about the female family members and their contributions towards their respective marriages.

**Hughes, Lauren, and Hollyann Gremmel:**

Dr. Anjuli Gairola

School of Natural Sciences and Allied Health

"Exploration of the Female Athlete Triad"

The female athlete triad is a syndrome composed of three interrelated components: (1) low energy availability; (2) menstrual dysfunction; and (3) decreased bone mineral density (Nazem & Ackerman 2012). This condition was brought to attention in 1992 by the American College of Sports Medicine upon recognition of the components among female adolescents and the young female athletic population (Kelly & Hecht 2016). "The triad occurs when energy intake does not adequately compensate for exercise-related energy expenditure, leading to adverse effects on reproductive, bone, and cardiovascular health" (Kelly & Hecht 2016). It is not required that all three elements be present for health complications to arise (Nazem & Ackerman 2012). Complications may include nutritional deficiency, infertility, unanticipated pregnancy, cardiovascular disease, increased risk of musculoskeletal injury, and increased risk of osteoporosis (Nazem & Ackerman 2012). It is recommended that Pre-Participation screening and diagnosis be conducted by a multidisciplinary healthcare team (De Souza et al., 2014).

**Jones, Aniyah:**

Dr. Maria Elena Hallion

Engagements with the Common Good

"The influence of technology on childhood obesity"

As a business major at Cabrini University, studying childhood obesity this semester showed that screen-time has a major effect on childhood obesity. Children who are affected by obesity are 70 percent more likely to continue being affected by it into adulthood. The use of technology has caused severe issues with children and their weight. How children are using that media time has shifted dramatically from 2011 to 2017. A third of all screen time is now mobile, with 35 percent of children on mobile devices in 2017, compared to 4 percent in 2011. Overweight is defined as too much weight for a given height, to be obese means too much fat for a given weight. Increases in "screen time" is one of the main contributing factors for childhood obesity because it results in less activity, increased snacking and exposure to advertisements of unhealthy foods and beverages.

**Joyce, Erin:**

Dr. Vinayak Mathur

School of Natural Sciences and Allied Health

"Fecal Microbiota Transplantation for Clostridium difficile Infections in Hospitalized Patients"

Clostridium difficile is a type of rod-shaped bacterium that releases toxins, which are responsible for causing C. difficile infection (CDI) in the gastrointestinal tract of susceptible human beings. CDI is characterized by watery diarrhea, abdominal pain, and fever. Antibiotics are used to treat initial CDI cases as well as the first several recurrence episodes; however, prolonged antibiotic use is associated with a decreased intestinal microbial diversity. Since the decrease in microbial diversity is the main risk factor associated with CDI, fecal microbiota transplantation (FMT) is an effective treatment for patients suffering from CDI. FMT works by correcting intestinal dysbiosis by transferring fecal material from a healthy donor but is only used clinically for recurrence episodes currently. The number of observed species decreased over a week timespan when patients were treated for CDI with vancomycin in comparison to FMT treatment, where the observed number of species remained stable. Additionally, the average bacterial composition also decreased when treated with vancomycin, whereas FMT treatment resulted in an increase in Bacteroidetes, a phylum of bacteria where high levels are associated with healthy individuals. Delays in approval by the Food and Drug Administration along with the limited healthcare facilities offering FMT are some of the reasons this treatment is not widely used. FMT should be offered for initial CDI episodes and more frequently for recurrent CDI episodes due to its profound effects on reestablishing balance to the gastrointestinal microbiome and the benefits associated with this type of treatment for the future health of the patient.

**Joyce, Erin, and Maria Khan:**

Dr. Anthony Tomasco

School of Humanities and Social Sciences

"Current Focus of Opioid Drug Addiction on the Brain"

Current literature has shown physician prescribed opioids have given rise to addictive behavior in individuals. Opioids are highly addictive drugs responsible for acting on the nervous system to relieve pain and produce pleasurable feelings. A person may become addicted to opioids due to a combination of genetic, environmental, and lifestyle factors. Endogenous opioids are naturally produced in the body and play a role in pain, reward, and addictive behaviors. When exogenous opioids are introduced into the body, such as in the forms of oxycodone, morphine, or heroin, these exogenous opioids bind to the receptor sites instead of allowing the endogenous opioids to bind. This binding results in an excessive amount of dopamine levels in the brain. Specifically, the mesolimbic reward system is activated by opioids, which generates the ventral tegmental area to signal the nucleus accumbens to release dopamine. Additionally, opioid binding to the mu receptors result in suppressed release of noradrenaline from the locus coeruleus, which contributes to some of the symptoms associated with increased opioid use. Methadone, one of the common medications used to treat opioid addiction, is a long-acting opioid that has a longer effect on the mu opioid receptors with an intent to normalize the unbalanced neurotransmitter levels associated with addicted individuals.

**Justin, Andre:**

Dr. Anthony Tomasco

School of Humanities and Social Sciences

"Neurological and Psychological Effects of Social Anxiety Disorder"

Social Anxiety Disorder is a condition where fear of rejection or being negatively evaluated by others result in both physiological and behavioral manifestations which significantly impair ones's quality of life. The focus for my research will center on the neurological mechanisms associated with social

anxiety disorder and ways to attenuate its deleterious effects. Attention will be given to those brain centers connected with this debilitating condition.

**Keller, Jessica:**

Dr. Sheryl Fuller-Espie

School of Natural Sciences and Allied Health

"The Rise of Antibiotic Resistance in Hospital-acquired Infections"

The topic of antibiotic resistance is of prime importance in research due to the threat it poses on health and safety. The origins of antibiotic resistance are within the soil where microbes have adapted to conditions over time to develop new ways that can cause resistance when exposed to antibiotics. Being a global threat, resistance to antibiotics can affect those as young as infants, to the elderly in all countries. The misuse, overuse, or uneducated prescribing of antibiotics has led to bacterial diseases becoming stronger and more powerful than what we use to treat them. Often, the origins or spread of this resistance is most prevalent in hospitals or environments that favor the acquisition of antibiotic resistant genes. A study examined this phenomenon with cultures obtained from surgical patients to test for pathogenic isolates. Patients affected with these aggressive pathogens had many antibiotic treatments that did not help due to the high resistance rates. Environmentally, antibiotic resistance genes were found in powdered formula for infants in another study, which proved the prevalence of these genes to make their way into the environment through disposal methods that are not regulated. Restrictions in the overuse of antibiotics, antibiotic usage in long hospital stays, and the improper disposal of antibiotics would be helpful to help eradicate the growing resistant strains of bacteria. The effects of antibiotic resistance among bacterial diseases is impactful to the biological sciences and the topic that will be discussed and studied in great lengths in this literary review.

**Khan, Maria, Kaila Wilkie, Egypt Edward, and Katie Coppola:**

Dr. Sheryl Fuller-Espie

School of Natural Sciences and Allied Health

"Sickle cell anemia: A recessive disorder characterized by abnormal red blood cells that affects personal interactions and abnormal systolic pulmonary artery pressure in affected individuals"

The purpose of this research is to understand the genetics and mechanism of sickle cell anemia (SCA). It is a recessive autosomal trait, therefore affecting both males and females equally. It is caused by a single amino acid substitution (from glutamate to valine) changing the entire structure and hence the function of the hemoglobin protein. People with SCA have problems with swelling of the muscles, problems associated with the abdomen, and leg ulcers, which historically have helped to recognize a "sickler." Its inherited through a parent who either has the disease or is a carrier of the disease. There are many forms of sickle cell such as hemoglobin SC, hemoglobin S $\beta$ O thalassemia and hemoglobin SE. When diagnosing SCA, a blood test is done in order to check hemoglobin S; it can be used for screening newborns, adults, and children. Treatment includes specific therapy called allogeneic hematopoietic cell-transplantation. While it affects many people around the world, one in twelve African Americans in the United States are carriers for this disease. In order to understand the disease at the molecular level, many studies have been done on SCA, two of which are presented in this poster. One of the investigations studied the interaction of parents and affected children. In contrast, the other study focused on why some people get pulmonary hypertension in stressful situations such as exercising. SCA is a devastating disease and the research presented in this poster reflects its origin and how the disease is treated.

**Klein, Jacob:**

Dr. Darryl Mace

School of Humanities and Social Sciences

"Jack Johnson: African American Boxing Pioneer"

John Arthur Johnson, commonly known as Jack Johnson, was the first African- American boxer to become the World Heavyweight champion. In a time, when racism had separated our country, athletes like Johnson weren't given many opportunities in sports. When given the chance, these athletes wanted to make the most of them. When Jack Johnson became the world's first black heavyweight champion in 1908, he instantly became a hero for people of color everywhere. Images of him dominating white fighters in the ring inspired colonized and racially oppressed people across the world. Jack's impact on the African American community was so immense, that it is still being felt to this very day

**Koroma, Albert:**

Dr. Crystal Anderson

Engagements with the Common Good

"The Relative Struggle of Bilingual Latinx Students"

It is my objective to discover what groups like ASPIRA is aiming to do in helping to make sure Latinx students are getting the help and education they need. In reference to this, I will research the objectives of the company and its goals. ASPIRA is designed for students that are struggling academically, students that need a more structured environment with individual attention and behavioral supports and students with autistic and exceptional needs. I will explore the levels of support that these students are receiving. My research will be tested at the Olney charter school where I can meet with staff to talk about the progress and achievements of bilingual Latinx students. I will be able to ask questions about the school's main objectives for the students and what they are doing to make sure the students are getting all the help and support they need.

**Libetti, Elizabeth:**

Dr. John Cordes

School of Business, Arts, and Media

"Connection between Commuter Students and Academics"

This pilot study will examine the academic performance of commuter students at college and take a look to see if being a commuter has a negative effect on their studies. Research has shown that among the number of students who drop out of college, or take gap years, a majority are commuter students. I would like to see if there is a connection between commuting and academic success as well as if the motivation for staying in school drops if not living on campus or with other students. Data will be collected through an anonymous online survey through SurveyMonkey. The survey will be posted onto my personal social media accounts as well as being sent via email and text message to students. Participants will be given a 19-question survey, taking about 20 minutes, that will ask participants questions about a variety of variables. These variables include living status, class level, age, and grade average. Results will be available for the annual Symposium.

**Longenecker, Joshua, Ayana Hall Goodman, Ryan Markowitz, and Adrian Keeney:**

Ms. Cindy Ross

Engagements with the Common Good

"Why Slavery Still Exists"

Slavery, also known as human trafficking, has been a practice in place for thousands of years. Today, organizations and governments work to save and free the victims of human trafficking from around the world. However, because much of the focus is directed towards remedying the issue of human

trafficking and saving victims, less focus is put towards closing the doors that allow human trafficking to still exist in the modern world. From failing governments to gangs and the misunderstanding of prostitution, the reality of what allows human trafficking to still exist will be broken down and explained at the Symposium.

**Looney, Andrew:**

Dr. Darryl Mace

School of Humanities and Social Sciences

"Jackie Robinson"

The poster will be about Jackie Robinson's life beyond breaking the color line on April 15th 1947. For this poster I will go deeper into his involvement with the Civil Rights Movement, and how he became a hero to many young African American, and how his entry into major league baseball led to the demise of the Negro Leagues.

**Lynch, Sydney, Latoya Cameron, Carly Schmalzried, Mark Sowinski, and Giovanni Vela Peralta:**

Dr. Erin McLaughlin and Ann D. Servey

Engagements with the Common Good

"The Truth Behind the Chocolate Supply Chain"

Fair trade promotes sustainable development and a sense of community involvement from people all around the world by creating a global system that will benefit our workers, farmers, consumers, industries, and the place we call home, Earth. Chocolate is one of the most common fair trade products available. Our poster presentation will demonstrate the difference between supply chains of a well-known company and a fair trade certified brand. Our group hopes that people will take away that their purchases have an impact on a greater scale than they think. When a person buys fair trade, they are ensuring that the workers received fair wages, there was no child labor involved, and the money they spend goes back into improving the community.

**Mancuso, Philip:**

Dr. Nancy Watterson

School of Humanities and Social Sciences

"Research, Policy, and Practice: A Closer Look At Foster Care Children in the U.S."

Children within the foster care system are often subject to abuse, neglect, and all too frequently, sexual molestation or sexual abuse due to foster parents not being properly screened. This poster examines the current American policies, practices and laws revolving around child placement and child development with an eye toward the reform. Drawing on a variety of fields and using American Studies' emphasis on multiple views voices, I argue that the foster care system needs to be amended. While I use bibliographic research American Studies, ethnography, social work, legal studies, and psychology what makes my presentation distinctive is the addition of a personal ethnographic account: my own life story. Preliminary results suggest that the current foster care system is a root cause contributing to further abuse and neglect of the foster care children in the US. The juxtaposition of my personal narrative may vivify, amplify, complement or complicate the academic accounts, the 'stories' of research, policy, and practices, presented in the secondary scholarship. Taken together, my capstone hopes to provide a multi-faceted story of the interpersonal relationship between children-and specifically one child, me-and the American foster care system. Perhaps my reflections on what has inspired me to push through and be the best that I can be might also inspire others.

**Martin, Mark, Lucy Travers, Kaylyn Galie, and Alexas Flas:**

Dr. Sheryl Fuller-Espie

School of Natural Sciences and Allied Health

"Ataxia telangiectasia an autosomal recessive disease affecting the nervous, immune and other body systems"

The purpose of this research is to be able to understand the genetic disorder of Ataxia telangiectasia. Ataxia telangiectasia is a genetic disorder and its prevalence is approximate, one in 40,000 live births. It is an autosomal recessive disorder meaning to inherit this disorder both copies of the mutated ATM gene from chromosome 11 where there has been a deletion at the end of the chromosome must be passed from both parents. Individual who inherit this disorder can display symptoms as early as the age of one year old. Some symptoms associated with Ataxia telangiectasia are followed; decrease coordination of movement, decreasing mental development, discoloration of skin areas, premature graying of hair, seizures and respiratory infections. The literature research presented conducts studies on individuals with Ataxia telangiectasia and ways how it has been successfully diagnosed. Both studies use different genetic practices including polymerase chain reaction (PCR), neurological index, testing brain glucose levels and western blot analysis in order to analyze the individual to determine what possibly caused the disorder. Although there is no known exact cure for Ataxia-Telangiectasia, so far, there has been much research, treatments, and great steps taken in the right direction to better understand and treat this disorder.

**Martin, Mark, Trio Patrick, Jais Truman, and Timothy Kahle:**

Ms. Cindy Ross

Engagements with the Common Good

"The psychological impacts on victims who have been trafficked"

Human trafficking is a form of modern-day slavery which involves the use of force, fraud, or coercion to obtain some sort of labor or commercial sex act. It happens to people of all ages, sex or social status. This is a worldwide epidemic because every year, millions of men, women, and children are trafficked in countries around the world. These people are victims and being trafficked causes psychological complications because of their traumatizing experiences they went through as victims. Each victim story is unique making the severity of their trauma different but all their psychological trauma stems from the same complications. Trafficking can leave victims with anxiety, insecurity issues, Post-Traumatic Stress Disorder (PTSD), memory loss and depression. These are just some of the complications that arise from being trafficked. In order to successfully help these victims, there should be laws enforced that protect these victims from being arrested and charged, as well as free access to support groups, therapy, and doctor visits.

**Martinez, Zachary, and Lucy Travers:**

Dr. Vinayak Mathur

School of Natural Sciences and Allied Health

"Annotation of Genes of the Bacteriophage Shubert"

The Schubert Phage is a bacteriophage that has been isolated from the organism *Microbacterium foliorum*. This phage is a member of the cluster EA and the subcluster EA8. We annotated the phage using software and databases such as BLAST, DNA Master, GeneMark, and PhagesDB. Shubert entails a total of 55 genes with a genome length of 38820 base pairs. Some of the genes in the phage that we identified code for Major Capsid Proteins, Portal Proteins and Proteases. Schubert also transcribes genes in the forward direction up to gene 27 followed by genes 28-55 being coded in the reverse direction. Although the phage has genes encoded in the forward and reverse direction, it is interesting that there

are no Schubert virion structure and assembly genes that are coded in the reverse direction. This phage is closely related to the phages Koji and Sinatra, but Schubert is the only phage that belongs to Pham 1. The purpose of this experiment is to study and annotate the genes that are found within the Shubert Phage.

**McCullough, Brittany:**

Dr. Anjuli Gairola & Mr. Dustin Malandra  
School of Natural Sciences and Allied Health

"The Relationship Between Reactive Strength Index and Speed in Division III Soccer Players"

This study will look to compare reactive strength index and speed in Division III soccer players at Cabrini University. Reactive strength index is a measurement that is calculated while jumping, which is jump height divided by ground contact time. This is being compared to speed, which is how fast someone can run in a 20-yard sprint. Due to the lack of literature on this topic, it is assumed that there is a correlation between the two, but it is not proven. Out of the approximate 30 student athletes, they will be asked to perform these tasks. On a jump mat, they will jump as high and as fast as possible in order to calculate reactive strength index. They will also complete a sprint using timing gates in order to accurately gauge how long it takes them to sprint 20 yards. Data will be collected at a future date and will be available at the symposium.

**Menkeng, Melissa, Syhirah Taylor and Lauren Kelley:**

Ms. Cindy Ross  
Engagements with the Common Good

"Public Service Announcement on Preventing Human Trafficking"

The specific purpose of this project is to bring awareness about Human Trafficking. In the video, we will show a visual representation on how people are lured into Human Trafficking. Towards the end of the video we will give a clear message of what Human Trafficking is and how to bring awareness to the public. This is important because people will see how easily you can fall into trafficking and how you can prevent it from happening to you.

**Michenfelder, Krista, Jasmin Brown, Najay Kidd, Brooke Weinecyk, and Theresa Burton:**

Ms. Cindy Ross  
Engagements with the Common Good

"Why Would a Parent Sell Their Own Child?"

This presentation takes a look at the sad reality of children being sold into sexual exploitation. Children all over the world are finding themselves being valued at a price and being sold to traffickers, pedophiles, and corrupt adoption agencies. Children are being sold for sex or work by their parents or guardian. This issue is most common in countries where poverty exists because it ensures survival for the rest of the family. Families living in poverty struggle with debt bondage and limited assets. However, even families in more developed countries are selling their children to help supply their drug addiction. By talking about this more it helps spread awareness of the issue of the sale and trafficking of children.

**Molinaro, Melissa, and J'Mya Mason:**

Dr. Crystal Anderson  
Engagements with the Common Good

"The Educational Struggles of Latinx Students"

Many Latinx students tend to be affected because of the language barrier as well as those with disabilities. In today's society, few people tend to pay attention to the academic struggles of Latinx students. It is not something that is normally broadcast on the news. People need to be aware of these



struggles because one day it will affect them and/or their family. The Latinx population is one of the fastest growing populations and people need to hear of their struggles. Informing others about ways to help these individuals so they can receive the support that is necessary is the purpose of our presentation. We would like to help other, including some organizations, to become more successful and reach their goals for each individual no matter what their struggle is. Our project will go into detail on our experiences at an organization called Hispanos Unidos para Niños Excepcionales (HUNE), where their mission is to provide educational assistance to those who need it. Our presentation will go into detail about ways to help these individuals as well as provide research and images to support what we believe are beneficial ways to help. Our main purpose is to show the struggle of Latinx students and persuade others to help as much as they can, even if they are unable to use some of our strategies. The results are not yet available and will be available the day of the Symposium.

**Moon, Gabriella:**

Dr. Anna C. Blice-Blum

School of Natural Sciences and Allied Health

"Alzheimer's disease: Potential natural treatments"

Alzheimer's disease (AD) is a progressive neurodegenerative disorder that was first identified more than a century ago by neuropathologist, Alois Alzheimer. It is characterized by neuropathological hallmarks, including plaques comprising mostly amyloid beta ( $A\beta$ ) and neurofibrillary tangles (NFTs) that are induced by the hyperphosphorylation of the tau ( $\tau$ ) protein. AD is the most common type of dementia among the elderly, affecting more than 5.5 million Americans and 15 million worldwide. There is currently no known cure for the disease, although there are palliative treatments available that target disease-related pathologies including  $A\beta$  plaques and dysfunctional mitochondria. Two studies that investigated potential natural treatments for AD used the 5xFAD mouse model, a commonly used AD mouse model that is characterized by accelerated and extensive  $A\beta$  accumulation in the brain. One study investigated the effects of natural Cur and solid lipid curcumin particle (SLCP) on  $A\beta$  plaque burden and anti-inflammatory activities in the model. As a result, both natural Cur and SLCP significantly reduced  $A\beta$  plaque load, but SLCP produced a larger decrease in the prefrontal cortex (PFC) and dentate gyrus (DG) of the hippocampus. Another study investigated the anti-amyloidogenic and anti-inflammatory effects of fish oil (FO) supplementation as a natural source of omega 3 polyunsaturated fatty acids (PUFA). The researchers found that FO supplementation significantly reduced the number of  $A\beta$  plaques in the parietal cortex of the 5xFAD mice. These findings can be used in future research to develop better treatments options for the progression of AD.

**Murphy, Avery:**

Dr. John Cordes

School of Business, Arts, and Media

"Yoga"

"Does Yoga and meditation reduce stress and anxiety?" I chose this question because we live in a society where there is a lot of pressure, stress, and expectations that may be unrealistic at times and can lead to anxiety and mental stress. I will answer my research question through in-person interviews and surveys through Survey Monkey utilizing convenience samples. Questions for this pilot study include use of yoga, meditation and mindfulness, mental health, life stressors and fluids intake. Final data and analysis will be available for this year's annual Symposium. I asked questions on my survey that would reveal lifestyle choices, stress levels, and whether or not people had any experience with yoga, meditation, and mindfulness. I asked questions like "rate your stress levels within your family, socially and academic/work life." Also whether or not the choices that they made regarding caffeine intake affected them. I also wanted to find out if people were familiar with strategies to center themselves and being more at

peace with their daily lives. The last questions I asked were related to anxiety and if anyone has or feels anxiety about life, school, work, and socially. These questions will give me an idea whether or not people are aware of the benefits of yoga and meditation and the benefits it can provide, which reduces stress, and anxiety. There is text that says that if the person changed their mind about wanting their information shared, that I would destroy their data.

**Murphy, Madelyn, Megan Droege, Anthony Frasca, Angelica Lara, Raechel Aviles, Rue Kennedy:**

Dr. Susan Jacques Pierson

School of Education

"Bridges to Zambia"

Presenters are excited to share what has been learned in a semester long study of the history, culture and geography of Zambia in preparation for an immersion experience there this coming summer. Cabrini University was awarded a Fulbright Grant by the United States Department of Education that will fund a short term (one month) stay in Lusaka, Zambia. Eight Education students and four Business students will be working in solidarity with Project Zambia, Vision of Hope and the St Lawrence School. They will work in the schools and also help establish a microbusiness for women and their children living at Vision of Hope. This presentation will inform the Cabrini Community about the project and also solicit support.

**Murtha, Megan:**

Dr. Anna C. Blice-Blum

School of Natural Sciences and Allied Health

"The process of fingerprinting paired with methods & techniques of analytical chemistry for the enhancement of drug testing"

The traditional approach to detect performance enhancing drugs and androgenic-anabolic steroids (AAS) within NCAA athletes includes a urine sample collection and the use of either a Gas Chromatograph Mass Spectrometer (GC-MS) or High Powered Liquid Chromatograph (HPLC) MS. The GC-MS and HPLC-MS have been deemed viable methods for drug testing analysis. However, the processes are inefficient, costly, invasive, and prone to tampering or alteration. In recent research, it has been discovered that the presence of drugs, whether consumed or handled, can be detected through the noninvasive collection and analysis of an individual's finger print. Drug detection through an individual's fingerprint presents the opportunity for a noninvasive and more efficient drug testing process. Once the fingerprint sample is collected on a nonporous surface and prepped, it can be analyzed using Cyanoacrylate Fuming (CAF) Matrix Assisted Laser Desorption Ionization (MALDI), Vacuum Metal Deposition (VMD) MALDI, CAF-VMD-MALDI, or Silver-Assisted Laser Desorption Ionization (AgLDI), all of which are paired with MS for further imaging development. The instrumentation has demonstrated its ability to detect illicit drugs such as cocaine, the cocaine metabolite BZE, heroin, and tetrahydrocannabinol (THC), all of which are of interest to the NCAA. Future experimentation and the advancements of MALDI and AgLDI can lead to the expansion of the instrument's detection library. Once the instrumentation has the ability to detect AAS and performance enhancing drugs, the process of analyzing fingerprints for the presence drugs could become the preferable technique used within drug testing for collegiate level athletes.

**Nammah, Amoleen, Zachary Martinez and Mitchell Cepeda:**

Dr. Sheryl Fuller-Espie

School of Natural Sciences and Allied Health

"Marfan's Syndrome, An Autosomal Dominant Genetic Disorder Affecting Connective Tissue"

The purpose of this research is to be able to understand the genetic disorder known as Marfan syndrome. This disorder is caused by the FBN1 gene that is located on the fifteenth Chromosome. This Autosomal Dominant Heritable disorder leads to a variety of abnormalities found in the Thoracic Cavity. Cardiovascular abnormalities have an effect on the Aortic Root due to the fact that Marfan syndrome also affects the connective tissue. Aortic Dissection is a common complication of patients with Marfan syndrome where the inner lining of the Aorta has a tear which is life-threatening. Aortic Dissection is common due to the fact that those with Marfan syndrome often have a stiff Aorta. A normal Aorta is flexible and can withstand the major blood pumping that the artery normally has. Along with Connective Tissue abnormalities, Marfan syndrome also causes Musculoskeletal Abnormalities that can cause Scoliosis, Osteoarthritis, Patellar Instability, as well as Protrusion Acetabula. Possible Gene Therapy methods are also discussed in the conclusion section.

**Nammah, Amoleen, and Rose-Carla Lucien:**

Dr. Crystal Anderson

Engagements with the Common Good

"Asociación Puertorriqueños en Marcha Agency"

In this project, the goal was to research and explore Asociación Puertorriqueños en Marcha, a community-based organization which was founded in 1970 by a group of Puerto Rican Vietnam veterans, who after returning from the war wanted to change their community that was in great need. The non-profit organization works in the Philadelphia region to help improve the life of the community. Their mission is to help families achieve their greatest potential and they work with children by nurturing and protecting them to become future leaders. Asociación Puertorriqueños en Marcha partner up with agencies and other organizations to serve thousands of people with bilingual and cultural social services which may include education, economic development or health. In building strong foundations and secure homes, APM has programs that provide training for adoptive and foster care parents and also a housing counseling program that prepares future/first time homeowners. Moreover, they offer an option for donations on their website, which is perhaps their sources of income to give back to their community. We intended to research a Latino-based organization that serves the needs of the Latinx population. APM was researched as an agency that is potentially contributing to the educational experiences of Latinos so that young people, in particular, can minimize challenges such as language barriers and cultural differences that can interfere with Latinx student experiences.

**Naula, Sylvia, Joshua Sanchez, Mike Gerzabek ,Kristen Sulpizio, Tyler Moschella, Christian Jones, Giovanna Primavera, Holly Gremmel, Jelani Diabo-Wimberly ,Lauren Vanstone, Lauren Wilhelm, Lauren Hughes, Grey Stephens, ToriDelusant, Ivana White, Kiara Patterson, Sylvia Naula, and Julian Melchiorre:**

Catherine Pressimone Beckowski

Engagements with the Common Good

"The Road Home: The Marathon to End Homelessness"

This interactive exhibit, presented by students from ECG 300: Social Change Through Running, invites you to engage in the "marathon" to end homelessness. At each mile marker, participants will learn about causes of and stigmas against homelessness; current challenges like the opioid epidemic that complicate the experience of homelessness; and efforts to address and end housing insecurity in and

beyond Philadelphia. The presentation will also spotlight community partner Back on My Feet, an organization that uses running to empower and support individuals who are experiencing homelessness. At the end, participants will be invited to engage in advocacy actions in support of efforts to end homelessness.

**O'Toole, Alexis:**

Dr. Darryl Mace

School of Humanities and Social Sciences

"Warren G. Harding: A Ruined Reputation"

My project is about Warren Gamaliel Harding. This Republican's presidency ran from 1921 until his death in 1923. Historians view his presidency negatively, and he is often ranked as one of the worst presidents in United States' history. He is commonly known for the large amount of scandals throughout his presidency, such as the Teapot Dome, the Justice Department, and his affair with multiple women including Nan Britton. Another reason his presidency was tarnished was because of his lack of vision on how he wanted the country to advance. The attention Harding receives from most historians focus on the acts that lead to his damaged reputation. The purpose of my project is to address these reasons and explain how the president's actions and failure to address these actions lead to his legacy as one of the worst presidents in United States history

**Parker, Amy, and Naidelyn Rodriguez:**

Dr. Maria Elena Hallion

Engagements with the Common Good

"The Increase in Childhood Obesity related to the Increase of Fast Food"

In the last 20 years the number of obese children around the world has nearly tripled. In the United States alone approximately 18.5 percent of children/adolescents ages 2-18 years old are obese. Over 13.7 million children in the U.S. are above the 95th percentile and therefore considered obese. There are several factors that have contributed to this inflation in obesity rates, including the increase in fast food. Since the 1970's, obesity has tripled and the number of fast food restaurants has doubled. Fast food is highly processed and most items contain high fat, calories, sugar, and sodium. The accessibility of fast food has also become a problem due to the fact that it has become a convenient and inexpensive method of obtaining food. A study conducted determined that proximity and therefore accessibility to fast food increased obesity in children.

**Perez, Estefany:**

Dr. Anna C. Blice-Blum

School of Natural Sciences and Allied Health

"Cancer cell growth inhibited by disintegrins isolated from snake venom"

Cancer remains a disease with a poor prognosis. Common cancers found in humans are ovarian, breast and pancreatic cancer. Recently, snake venom disintegrins have received special attention due to their potential use in anticancer therapy. Disintegrins are small, disulfide-rich, Arg-Gly-Asp (RGD)-containing peptides from snake venom that bind to integrins on the surface of healthy and malignant cells. Integrins are heterodimers, composed of  $\alpha$ - and  $\beta$  subunits, on the surface of cells mediating cell-cell and cell-extracellular matrix interactions. The studies performed similar methods to evaluate the effectiveness of the disintegrin(s) on different cancer cell lines. A common method used was an adhesion assay. The first study used recombinant disintegrin, r-Cam-dis isolated from the venom of *Crotalus adamanteus* was used to determine if the disintegrin can inhibit adhesion. The study's focus was to examine the reaction of r-Cam-dis with laminin-1 and vitronectin, highly involved in the malignant phenotype of pancreatic cancer cells. In a concentration-dependent manner r-Cam-dis inhibited

adhesion on three different pancreatic cancer cell lines, BxPC-3, Panc-1 and AsPC-1, from laminin-1 and vitronectin. The second study similar methods were used. The same integrins were being examined for adhesion but from two recombinant disintegrins, r-iridastatin 2 and r-mojastin, derived from *Crotalus viridis viridis* and *Crotalus scutulatus scutulatus*, on BxPC-3. In a concentration-dependant manner inhibited adhesion of BxPC-3 to integrins. The possibility that recombinant proteins are less toxic is due to the fact that disintegrins are non-enzymatic venom components, therefore tend to be less invasive and more therapeutic for cancer treatment.

**Philip, Rino, and Fernando Cornejo:**

Dr. Maria Elena Hallion

Engagements with the Common Good

"Effects of Screen time & increasing rates of Childhood obesity"

Childhood obesity is a serious problem in the United States putting children and adolescents at risk for future health problems. The Childhood obesity rate is at 18.5% affecting about 13.7 million children and adolescents. Childhood obesity can lead to many health risks at such a young age, like high blood pressure and high cholesterol which can lead to cardiovascular problems. Childhood obesity can also lead to type 2 diabetes, breathing problems and sleep apnea. There are many factors contributing to the recent rise in childhood obesity rates, but one that is fairly new is screen time. Extensive hours using technology known as "screen time", has a tremendous impact on a child's health. In addition to the inactivity that comes with screen time, children tend to eat more while they are on front of a screen. The more time they spend in front of a screen eating will increase the risk of obesity.

**Pisker, Julia, and Lisa Kelly:**

Dr. Ruta Clair

School of Humanities and Social Sciences

"Concussion Knowledge in College Athletes and Non Athletes"

Introduction: This poster was presented in an undergraduate poster session on March 2nd 2019 at the Eastern Psychological Association Annual Conference. Knowledge of concussion symptoms is somewhat limited in the general public (Porter et al. 2018, McKinlay, Bishop, & McLellan, 2011, Register-Mihalik et al, 2017) Misconceptions of symptoms and understanding when to seek formal evaluation are common (Porter et al. 2018).The purpose of this study was to analyze concussion knowledge of current college athletes and students who have never been athletes. Athletes are required to have concussion education. Students who are non-athletes are not privy to that same education. The two groups were compared concerning their knowledge base of symptoms, diagnosis, and recovery. Method: Data was gathered through the psychology department research participation pool. The measure consists of two parts. The knowledge and attitudes survey is a minimally modified version of the Rosenbaum Concussion Knowledge and Attitudes Survey, Student Edition (RoCKAS-ST). The Demographics and Concussion History questions were modeled on those developed by Register-Mihalik to examine demographic characteristics and concussion experiences. Results: The results indicated that non-athletes have little access to education concerning concussion. While both athletes and non-athletes are able to identify hallmark symptoms such as headache, there continue to be inconsistencies between their knowledge of concussions for both groups. Misconceptions were evident in both groups, concerning issues related to diagnosis, impact on memory, and physiological effects.

**Portelli, Marissa, and Kristen Bettermann:**

Dr. Anjuli Gairola

School of Natural Sciences and Allied Health

"The Protective Effects of Estrogen on the Cardiovascular System"

Estrogen is a hormone found in the human body. It is found in both men and women, with higher amounts found in women. Although estrogen is associated with secondary sexual characteristics, it also contributes to the protection of the cardiovascular system. There are many ways that estrogen can provide protective mechanisms for the cardiovascular system. Estrogen has been shown to help decrease oxidative stress. Also, estrogen helps decrease inflammation which is very important for the healing process and recovery of the body. Inflammation is a key element for the process of hypertension, atherosclerosis, and the development of coronary heart disease. The release of estrogen will also help improve endothelial and myocardial cell function after ischemia.

**Pottorff, Peter Joseph:**

Dr. John Cordes

School of Business, Arts, and Media

"The Corollary Effects of the Satanic Panic on Dungeons and Dragons --1978 to Present"

This pilot study examines the use of the Dungeon and Dragons. The literature on this subject mainly focuses on the psychology and application of roleplaying games and it was conducted from the mid-eighties to the late nineties with little published in the contemporary era. A convenience sample utilizing a social media platform and a convenience sample of players of Dungeons and Dragons from a Dungeon and Dragons web community were developed. Surveys and interviews were administered. And the Player's Handbooks from Basic Dungeons and Dragons to the Fifth Edition and various articles from Dragon Magazine were reviewed. Correlations between the Satanic Panic that occurred from 1978 to 1988, and the changes in the editions of Dungeons and Dragons are being analyzed as possible long-term effects. My hypothesis is if there is any correlation between the changes in the editions caused by the Satanic Panic they will be minimal at best. One limitation of this study is finding secondary data from thirty plus years ago. Final results will available at the April Symposium.

**Priest, Steven:**

Dr. Anjuli Gairola

School of Natural Sciences and Allied Health

"Blood Doping: Risk vs. Reward"

Performance enhancement techniques are very prevalent in today's athletic environment. Research on erythropoietin (EPO) and supplementation of this hormone is paramount to the understanding of physiological changes in the body dealing with the blood doping technique. Studies shown to prove positive and negative effects on this performance enhancement will be observed in my research. Reviewing the effects of increased red blood cell count in the blood stream, positively and negatively, is essential to allow better testing to ensure the athlete's safety and preserving the integrity of sports as a whole.

**Reiser, Sarah Kim:**

Dr. Sheryl Fuller-Espie

School of Natural Sciences and Allied Health

"Development of Chimeric Antigen Receptor (CAR) T Cell Therapy for Targeted, Personalized Treatment of Hematological and Solid Tumor Cancers"

In the development of cancer, the immune system interacts closely with a tumor through immunosurveillance and suppression, but these mechanisms are often evaded through secretion of immunosuppressors and cytotoxic resistance. Chimeric antigen receptor (CAR) T cells are a recent development in immunotherapy which combine the highly specific targeting mechanism of a B lymphocyte with the cytotoxic capability of a T lymphocyte. Considerations for immunological mechanisms in CAR T cell design and synthesis include various combinations of surface receptors to target the malignant cells and intracellular signaling pathways for different means of destruction. After initial challenges with efficacy and unforeseen toxicities, early models for treating hematological cancers, such as acute lymphocytic leukemia (ALL), were enhanced and developed into safe treatments which are currently on the market (Kymriah<sup>®</sup>, Yescarta<sup>®</sup>). Treatment of solid tumors presents a unique set of challenges in the microenvironment of the surrounding tissue. Some of these include a lack of tumor-specific targets distinct from surrounding healthy tissue and an immunosuppressive microenvironment as a result of cytokines preventing the CAR T cells from entering the area. Current investigations in this literature review focus on developing targets with greater specificity using more than one antigen target at a time, increasing persistence using co-stimulation of multiple intracellular signaling pathways, and using enzymes to modulate the microenvironment surround the solid tumor. Creative designs for more flexible CAR systems and conditional engagement will provide more targeted and safer treatment of all cancer types.

**Rohanna, Brian:**

Dr. John Cordes

School of Business, Arts, and Media

"What do people know about Title IX"

The purpose of this pilot project is to see how many people know something about Title IX and to see if anyone who has been a victim of sexual misconduct, harassment, or discrimination has reported this. Title XI is a federal law that states "No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance". The method will be a pilot study which has 25 question administered to a convenience sample on my social media platforms. My results will be available at the Symposium on April 30th.

**Romani, Isabella, Thomas Ngo and Sonia Spadafora:**

Dr. Sheryl Fuller-Espie

School of Natural Sciences and Allied Health

"The Examination of starch hydrolysis and  $\alpha$ -amylase activity in *Bacillus subtilis*, *Escherichia coli*, and *Proteus vulgaris*"

In order for bacteria to break down large macromolecules into their subunits, they must secrete exoenzymes that perform hydrolysis. Starch is a polysaccharide that must be broken down into disaccharides and monosaccharides in order to be transported into the cell for use. Bacteria secrete the enzyme  $\alpha$ -amylase in order to aid in the breakdown. In order to observe the presence of this enzyme and its activity, differential starch agar media can be used. Once given bacterial species - *Bacillus subtilis*, *Escherichia coli*, and *Proteus vulgaris* have been grown on the agar, Gram's iodine can be added to observe the presence of absence of  $\alpha$ -amylase. Because the iodine reacts with starch to produce a

dark purple/brown color, the observation of this color change is indicative of starch test negative; no  $\alpha$ -amylase activity is present to breakdown the starch. If the addition of Gram's iodine produces a clear halo, starch has been hydrolyzed into its subunits, and  $\alpha$ -amylase activity is present. Following addition of Gram's iodine to an overnight culture of *B. subtilis*, a clear halo formed, indicating the presence of  $\alpha$ -amylase. Following addition of Gram's iodine to overnight cultures of *E. coli* and *P. vulgaris*, purple/brown colors were observed; this indicated that no starch hydrolysis occurred, and there is an absence of  $\alpha$ -amylase in these species.

**Rosario, Dessire:**

Dr. Sheryl Fuller-Espie

School of Natural Sciences and Allied Health

"Possible Treatments for Epidermolysis Bullosa: Skin Grafts, Exon Skipping, and Viral Vectors"

Epidermolysis bullosa (EB) is a broad category term of skin diseases that is characterized by blistering and erosions that arise due to minor trauma. EB is a predominately genetic diseases that affects genes that are responsible for the integrity of the skin such as KRT5 (keratin), LAMB3 (laminin-332), COL7A1 (type VII collagen). There are four classifications of EB: epidermolysis bullosa simplex (EBS), junctional epidermolysis bullosa (JEB), dystrophic epidermolysis bullosa, and epidermolysis bullosa acquisita (EBA). Each classification localizes on a specific layer of the skin; EBS affects the epidermis layer; JEB affects the dermal-epidermal junction layer; DEB affects the anchoring fibrils that lie underneath the basement membrane; and EBA affects antibodies that target type VII collagen. Currently there is no cure for EB but there are treatment options available: skin grafts that have been transduced with the corrected gene or targeted exon skipping to realign the reading frame so that the mRNA sequence can be translated correctly. The Moloney leukemia virus (MLV) is a virus strain that has recently been used as an effective viral vector for COL7A1. Most of the viral vector research has been conducted on recessive dystrophic epidermolysis bullosa (RDEB) because of the severity of the disease. Treatments such as skin grafts become less effective due to the level of type VII collagen expression decreasing over time. Future research needs to focus on long-term treating options that can ensure stable expression of type VII collagen

**Russo, Anna:**

Dr. Vivian C. Smith

School of Humanities and Social Sciences

"The Role of Race in the Media Coverage of Mass Shootings"

Mass casualty shootings have been on the rise in the United States over the past two decades, increasing in both frequency and scope (National Center for Victims of Crime, 2018). The purpose of this research is to analyze how the media coverage of mass shootings varies based on the perpetrators' race. Specifically, the current study will examine whether narratives of mental illness are included in coverage of white perpetrators disproportionately, and if such narratives are used to divert blame for white perpetrators at higher rates compared to their black or Hispanic (or other) counterparts. The current study uses data from fifty news reports from January 1st, 2017 to December 31st, 2018, which were randomly selected following inclusion criteria and systematic intervals. Using content analysis, researchers coded for narratives of mental health and blame diversion, and race. Qualitative analysis was also conducted to identify further trends. Results of the study can guide future research on the biases of news media and the implications such biases may have on public perceptions.



**Salazar, Thariana, Ruth Georges and Rebecca Shumard:**

Dr. Anjuli Gairola

School of Natural Sciences and Allied Health

"The Effects of Music on the Perceived Intensity of Exercise in Recreationally Active College Students during a Submaximal Treadmill Test"

Some theories suggest that music helps the body respond to rhythmic components, narrows down attention and distracts the individual from perceived fatigue in submaximal activities (RamezanPour, 2011). This implies that music can influence the intensity of an individual's performance. Minimal research has been done on the effect music has on the perception of intensity during submaximal exercise in recreationally active college students. Therefore, this study investigates the perception of intensity while listening to music during the submaximal treadmill test among recreationally active college students. It is hypothesized that listening to music during treadmill exercise (20-minutes) will have an effect on the perception of intensity. The purpose of this research is to observe how music affects the perception of cardiovascular performance in recreationally active college students. The independent variable is music and the dependent variable is RPE measured through Adult OMNI- Walk/Run RPE Scale (1-10). The data collection will be analyzed using SPSS Software package.

**Salazar, Thariana:**

Dr. Anjuli Gairola

School of Natural Sciences and Allied Health

"Cardiovascular Response to Exercise, Nutrition and Heart Health"

Exercise and healthy nutrition are key strategies in lowering the risk of heart disease. Physical activity lowers the risk of cardiovascular diseases (CVD) and is proven to be beneficial for the heart and lungs. Performing moderate to high intensity exercise strengthens the heart muscle. Nutritious foods also avoid heart complications in the long run and keeps the heart healthy. Nutrition foods such as Pulses (beans, peas and lentils) is a great choice of foods that are known for the antioxidant properties, rich in vitamins and minerals (Mudryj, 2018). In order to enhance the amount of nutrients from pulse it is recommended to consume; 4 to 5 times per week between 2.5 and 3.5 cups (Mudryj, 2018). The lack of exercise, consumption of alcohol, smoking, increased level of lipids and consumption of high fat diet contributes to the increased risk of cardiovascular disease (Singh, 2013). Several strategies to reduce cardiac events include; pre-participation screening and excluding high risk patients from vigorous exercise participation (Thompson 2007). The American Heart Association recommends a minimum of 30 minutes of moderate intensity for 4 to 6 days a week for improvement of cardiovascular health (Vella., 2011). Increasing the amount of exercise improves the heart's health and cognitive function of older population with CVD (Stanek, K, 2011)

**Sanders, Latifah:**

Dr. Vivian C. Smith

School of Humanities and Social Sciences

"The Relationship between Race and Long-term Incarceration"

According to the Sentencing Project (2018) 60 percent of persons in prison are Black males. African American males are more likely to be imprisoned than White men in society. The policies, which extended from the war on drugs, targeted people of color and has intentionally led to the criminalization of Black men and women in society (Burke, 2002;Collins, 2005). The purpose of this study is to examine how the federal sentencing laws affect the incarceration of African Americans for drug related crimes. The data for this study comes from the United States Sentencing Commission (2016). The total sample is N=58,030, people sentenced to prison at the federal level. The results of this study could potentially guide future sentencing policies regarding drug related crimes.

**Santos, Bianca:**

Dr. Sheryl Fuller-Espie

School of Natural Sciences and Allied Health

"A comparative study investigating efficacy of different pharmacological agents on follicular development and control of symptoms in Polycystic Ovarian Syndrome patients"

Polycystic ovarian syndrome (PCOS) is a common endocrine disorder seen in as many as 8% of females of reproductive age. It is characterized by hyperandrogenism, anovulation, and/or polycystic ovaries.

PCOS is known to cause various issues such as hirsutism, hair loss, weight gain, acne, and infertility.

Although PCOS has an impact on multiple systems, treatment is usually only sought when patients seek pregnancy. The syndrome affects decades of a patient's life, however, and new research has shown that more serious symptoms are also involved. These include psychological issues, higher risk of miscarriage, strong correlations with autism spectrum disorder (ASD), and heart health complications later in life.

Because of this, symptom intervention should be taken more seriously. New treatment methods include new medications, improved methods of administration, and combinations of conventional medications.

Treatments for many patients are tailored to individual needs and response profiles. If superficial remedies are sought (improving hirsutism, acne, etc.) spironolactone and oral contraceptive pills are an effective route, while myo-inositol and metformin have caused major improvements in insulin sensitivity as well as weight loss. For individuals looking to conceive, recombinant FSH, intermittent clomiphene citrate treatment, and letrozole have proven effective. Interestingly, each treatment modulates the mechanism of action of PCOS in different ways. For the purposes of correcting ovulation, FSH has been found to be the most successful by improving hormone balance and induction of ovulation. However, when considering the various financial states of patients, the other treatment methods are still strong contenders.

**Scardelletti, Abigail:**

Dr. John Cordes

School of Business, Arts, and Media

"Outside Factors: Learning in the Classroom"

This pilot study will examine any outside factors that play a role in a student's learning while a classroom setting. Research has shown that students are not always reaching their full potential in the classroom and it is not always what is happening in the classroom that stops the student from learning. The factors that go into a student's learning are who their teacher is, what subject or subjects they are taking, how the classroom is set up and more. However, what mindset the student is in comes from outside the class. The factors may include food insecurity, mental health challenges, not having access to necessary materials (i.e. computers, wifi, etc), learning differences, home life issues and other factors. Data are being collected by a survey on Survey Monkey. It will be taken from a pool of students at Cabrini as well as other possibly other schools. Final data and analysis will be available for the 2019 Symposium.

**Scarpone, Sophia, Kaludia Walewska, Deanna Wyche, Anna Bauer, Hunter Steelman, Riddhiben Parmar, Maria Khan, Egypt Edwards, and Andrews Torres:**

Dr. Carrie Nielsen

School of Natural Sciences and Allied Health

"Nutritional Analysis of Food Pantry Ingredients"

The purpose of the research that follows is to better understand the nutrition deficiency of college students due to improper meals, meal irregularity, and the inability to obtain food. Many college students spend their day running between classes, sport practices, and work shifts. With that, college students are more likely to be deficient in nutrients, vitamins, and macromolecules. To help lighten this

burden on students, some colleges provide students with a food pantry that offers nutritious items at no cost. However, many students do not have the knowledge of how to make a nutritious meal out of the items provided. Therefore, social justice scholars at Cabrini University researched local food pantries and colleges to better understand their system of production and the items that are offered. Students created recipes that detail the nutritional value, ingredients, and steps that an everyday college student can create from their dorm room. The hope is that students who struggle with food scarcity can focus on their education and not on their next meal.

**Scarpone, Sophia, Hunter Steelman and Juliana Khanuja:**

Dr. Sheryl Fuller-Espie

School of Natural Sciences and Allied Health

"Possible Techniques Used to Treat the Symptoms of Fibrodysplasia Ossificans Progressiva and the use of Genetic Analysis for Diagnosis"

The purpose of this research is to be able to understand the genetic disorder of Fibrodysplasia.

Fibrodysplasia Ossificans Progressiva (FOP) is a rare inherited connective tissue disorder characterized by the abnormal development of bone in areas of the body where bone is not normally present. It is mainly characterized by large deformed great toes. No long-term treatment plan has been devised for the cure of FOP. Drug repositioning strategy and Symptomatic management are possible treatment plans that can be used in future cases. Currently, avoidance of intramuscular injections and trauma are the commonly used forms of temporary treatment. Moving forward research is being done to determine a more accurate diagnosis of the inflammatory triggers that cause flare-ups of the disease.

**Scharf, Devon:**

Dr. Anjuli Gairola

School of Natural Sciences and Allied Health

"The Effect of Electrolytes on the Cardiovascular and Metabolic Systems in the Body"

Electrolytes are minerals that have responsibilities all throughout the body. They help with muscle contractions, nerve impulses, water balance, enzyme reactions, and structural balance. Electrolytes "are electrically charged ions dissolved in body water" (Prentice, 2017). Many athletes know about electrolytes and their importance for optimum performance. The real question is if they actually know what electrolytes are and how they can enhance and/ or hinder performance. Some of the most common electrolytes are calcium, potassium and sodium. All three of these work together to help muscle contractions occur. Calcium also helps with nerve impulses while sodium helps with the fluid balance in the body.

**Scott, Jala:**

Dr. Vivian C. Smith

School of Humanities and Social Sciences

"Probation and Parole Officers' Discretion and its Effect on Clients' Recidivism"

Probation and parole officers do not always comply with assessment tools, due primarily to two factors; officers sometimes disregard assessment results and rely on human judgment and professional override when making case management decisions (Schaefer and Williamson,2018). Langan and Levin (2002) found that about 25.4% of all state prisoners who were released in 1994 were returned to prison within 3 years for criminal violations, and 26.4% were returned for technical violations within 3 years of their release (Kerbs, Jones& Jolley, 2009). The purpose of this study is to determine whether the discretion of probation and parole officers affects on their clients' recidivism. The data for this study is derived from the Survey of Inmates in State and Federal Correctional Facilities in 2004, which comes from the Inter-University Consortium for Political and Science Research (ICPSR 4572). The total number of participants

is N= 18,536. Secondary data analysis will be performed to determine the results. Findings from the study can guide future discretion guidelines for officers.

**Shemonski, Jordan, and Hannah Dalton:**

Dr. Anthony Tomasco

School of Humanities and Social Sciences

"Dyslexia Affects the Brain and Learning"

Dyslexia is a general term for disorders that involve difficulty in learning to read or interpret words, letters, and other symbols. While dyslexia does not negatively affect or worsen overall intelligence, it does affect learning and puts a daily strain on as many as 43.5 million Americans who have been diagnosed with it. Our symposium presentation will review recent research on dyslexia. Our focus will be on current research which provides an understanding of the underlying neurological factors associated with dyslexia as well as a review of the current effectiveness of diagnostic and remedial approaches for dyslexia.

**Shumard, Rebecca, and Ruth Georges:**

Dr. Anjuli Gairola

School of Natural Sciences and Allied Health

"Hurler Syndrome: Mucopolysaccharidosis Type I (MPS I)"

Mucopolysaccharidosis I (MPS I) also known as Hurler Syndrome is a rare genetic disease caused by the mutation of the alpha L-iduronidase enzyme that is responsible for break down of glycosaminoglycans. The excess build up of glycosaminoglycan has been linked respiratory disabilities, abnormal growth and heart failure. Children born with Hurler disease have the average lifespan of ten years old, almost all cases of the disease the victims had a premature death. But with recent technological advances in medicine patients are able to receive an array of treatments to manage the mucopolysaccharidosis I, some treatments include bone marrow transplants, enzyme replacement therapy, airway therapy and physical therapy to help increase their quality of life. While modern medicine has not discovered a cure for Hurler Syndrome, a combination of medical therapies and Physical activity can help prolong the child's life.

**Sithara, Lattana, and Jordan Shemonski:**

Dr. Maria Elena Hallion

Engagements with the Common Good

"Childhood Obesity Consequences and Solutions"

Childhood obesity is a world epidemic, and specifically in the United States affects 1 in 5 school aged children (ages 6-19). It is important to combat this disease in order to prevent children from future long-term negative effects on physical, social, and emotional health. Some contributing factors of the rising rates of childhood obesity include increase use of technology, economics or access to healthy foods challenges and lack of physical activity opportunities. Consequences that can develop for an overweight or obese child include diabetes, cardiovascular diseases, musculoskeletal disorders, depression and even cancer. Statistically, at least 2.6 million people die each year from being overweight or obese. In an effort to resolve this growing problem, national programs such as "We Can!", "Just for Kids!", "Choose MyPlate", integrate strategies to help children, parents or guardians, and health professionals take action to prevent and manage obesity. Some of the methods involve a variety of resources that can be used in offices, schools, and at home.

**Smith, Helen, and Sean Heron:**

Dr. Sheryl Fuller-Espie

School of Natural Sciences and Allied Health

"The Use of the Heterotrophic Plate Count Test in the Determination of the Bacterial Content of a Beef Sample"

The purpose of the heterotrophic plate count is to determine the overall quality of a food sample. The theory behind the test is: a higher number of colonies on the heterotrophic plate indicates a larger amount of bacteria in the sampled food product. If there is a larger amount of bacteria in a food product, there is a higher chance that one of those stains is pathogenic. A low number of colonies therefore indicates a "clean" food product. The beef used in this experiment was of the lowest quality at Giant Supermarkets. The sample was weighed, liquified, diluted in 0.85% NaCl Solution, and plated at varying concentrations using a pour plate technique. The number of colonies on each plate was recorded, and the number of colony-forming unites per gram was calculated. In order to be considered uncontaminated, a food sample must contain fewer than  $1 \times 10^6$  colony forming unites per gram, a figure set by the FDA. Our sample contained  $6 \times 10^3$  CFU/g. This result, on paper, states that this low-grade beef would satisfy the FDA's stringent requirements by a margin of three orders of magnitude. While we remain optimistic about this quality of this beef, the experiment was conducted after the sample was refrigerated, with the seal broken, for one week. The extreme margin by which this sample of low-grade beef seems to satisfy the FDA's standards, implies that either the test was performed incorrectly or the heterotrophic plate count is not a reliable method for determining the magnitude of contamination of a food staple.

**Smith, Sarah:**

Dr. Anjuli Gairola

School of Natural Sciences and Allied Health

"Maternal antihypertensive treatment and its effects on child development"

Maternal antihypertensive treatment is a topic that is extremely complex. There are four different conditions and two classifications of hypertension relating to pregnancy. The four conditions of maternal hypertension are: chronic hypertension, gestational hypertension, preeclampsia-eclampsia, and superimposed preeclampsia. The two classification categories are mild-to-moderate, and severe. Treatment of maternal hypertension relies on reasoning of the obstetrician or gynecologist, and choice of medication or alternative treatment options. Most importantly, research has looked at and continues to investigate maternal and teratogenic effects of treatment options and the absence of treatment. This review of six research studies examines the safety of the most common medications for treating hypertension in the pregnant population. The medications fall into the following broad categories based on their physiological function:  $\beta$  adrenoreceptor antagonists, Angiotensin-Converting Enzyme Inhibitors, Angiotensin Receptor Antagonists, Centrally and Peripherally Acting  $\alpha$ -Adrenergic Agents, Calcium Channel Antagonists, and Diuretics. Alternative options for treatment, are briefly explored as well. The treatment has many surrounding controversies and ethical considerations that complicate the topic. Current research has pointed out additional opportunities for future research.

**Sorrell, Infinity:**

Dr. Vivian C. Smith

School of Humanities and Social Sciences

"The Criminalization of Mental Illness"

There has been a significant increase in the number of individuals with a serious mental illness who are incarcerated in jails and prisons over the last 20 years (Constantine, 2010). Consequently, correctional institutions have become the largest providers of mental health treatment in the United States

(Abramsky & Fellner, 2013). Incarcerating persons with mental illness absorb criminal justice resources straining the system and placing people in settings that are not intended to address mental health problems (Gur, 2010). The purpose of this study is to examine the likelihood of arrest for people with mental health diagnosis. This study will use the National Survey on Drug Use and Health, 2011, which comes from the Inter-University Consortium for Political and Science Research (ICPSR 34481). The total number of participants is N= 39,082. Secondary data analysis will be performed to determine the results. Findings from this study can guide future training and prevention of the unnecessary use of criminal justice interventions in mental health issues. on Drug Use and

**Spadafora, Sonia:**

Dr. Sheryl Fuller-Espie

School of Natural Sciences and Allied Health

"Analysis of tooth restoration and surgical techniques for bone grafting and sinus augmentation in dental implantology to determine implant longevity and procedure effectiveness"

The clinical practice of dental implantology is perhaps the most popular dental treatment procedure today. By combining surgery and tooth restoration procedures, much is being uncovered about this art within the dental community. Implants replace a dysfunctional root or roots and are secured in the jawbone through surgery. When there are anatomical limitations in the maxillary region of a person's dentition, maxillary sinus floor elevation is an important precursor in dental implant treatments. The treatment goal of elevating, and ultimately thickening the sinus floor is to increase residual bone height for subsequent placement of dental implants in the maxillary sinus region. This literary review analyzes the best approaches and risks of sinus augmentation. The lateral window and palatal approaches highlight two methods which oral surgeons have used to expose the maxillary edentulous membrane. Different types of bone grafts are placed to increase bone density in patients, the most popular being autologous bone and biphasic calcium phosphate. Post-operatively, implant exposure and analysis of marginal bone loss; presence of infection, and restoration longevity are reviewed using radiographic analysis to deduce treatment success or failure. While implants and sinus augmentation are the most readily used approaches for maxillary implants where there is insufficient bone density, there are often risks. Chronic rhinosinusitis and iatrogenic transmission of prion infections result from poor postoperative care and improper sterilization of graft materials. The benefits of sinus augmentation far supersede its risks, and with the proper patient treatment planning, the procedure can restore one's smile and mastication.

**Spielberger, Andrew, Marc Consiglio, Thomas Feldman, Victoria Monterosso, Jonathan Owens, and Jennifer Sinchi:**

Dr. Erin McLaughlin and Ann D. Servey

Engagements with the Common Good

"Empowerment through Social Business"

This presentation will illustrate how creating a social business can address and provide long-term solutions to social, environmental, and economic problems within a community. ECG 200 People, Planet, and Profit are partnering with Vision of Hope (VoH) in Lusaka, Zambia. VoH provides a safe place where girls and young women can live in a stable and protected environment while gaining access to resources, such as medical care and educational support. The purpose of this ECG community engagement is to involve Cabrini students interested in business to collaborate with VoH to create a social business plan with the intent of empowering young women in Lusaka, Zambia. The business will be managed by the young women at the VoH.

Summer 2019, twelve Cabrini students with faculty will be visiting VoH in Zambia, to assist in implementation of the social business plan. Through entrepreneurial action, sustainable development,

and partnerships with Vision of Hope, Project Zambia, Cabrini University and Enactus, young women will be able to transform their lives with this income-generating business and break the cycle of poverty. The engagement focuses on methods from the Integral Human Development (IHD) model to create sustainable-long term growth.

**Stern, Sydney:**

Dr. Vinayak Mathur

School of Natural Sciences and Allied Health

"The Applications of Personalized Medicine, Pharmacogenomics, and Genetic Testing for the Treatment of Depression"

Personalized medicine is a combination of standard medical practices, genetic testing, and pharmacogenomics. The goal is to determine a patient's genetic composition and use that information to guide treatment. This customized plan is applicable to many areas of medicine, such as drug development, diagnosing genomic diseases, analyzing the origination of cancer, and treating psychiatric disorders. The applications of personalized medicine are beneficial for the treatment of mental illnesses, specifically depression. Through a series of different genetic tests, determining drug metabolism, correlation to other mental illnesses, and statistical analysis tailored therapies can be designed for each patient. This approach reduces the "trial-and-error" period of prescriptions, quickly reduces symptoms, and increases the patient's well-being. Research indicates that genetic testing is crucial and beneficial for the diagnosis and treatment of depression. Patients that have undergone treatment reported successful prescriptions, minimal side effects, and improvement in condition. These benefits demonstrate the necessity for personalized medicine in the treatment of depression and all mental illnesses. Understanding the role of genetics in the human body and creating a treatment plan with that information is the future of medicine.

**Stief, Madison, and Behn Worley:**

Dr. Crystal Anderson

Engagements with the Common Good

"Raíces Culturales Latinoamericanas, Inc."

Upon taking this course, ECG 200 "The Educational Experiences of Latino Students" our knowledge and awareness of Latinx students was minimal. Through this course we have gathered a great understanding of the social situations involving Latinx students, which is what inspired us to learn more. By looking to further our knowledge we wanted to explore firsthand some of the experiences of Latinx people, so we went to the Raíces Culturales Latinoamericanas, Inc. With this visit our eyes were opened to how just a small influence on Latino culture can go a long way. The RCLA is an organization that wants to spread Latinx culture through music, because it is one of the most powerful ways to showcase their culture in American society. To us, this organization will be able to bring awareness to more people in an environment they can also enjoy.

**Sweeney, Rachel, Sawsan Khogali and Fatimah Kamara:**

Dr. Sheryl Fuller-Espie

School of Natural Sciences and Allied Health

"Hutchinson-Gilford Progeria Syndrome"

The purpose of this research is to be able to understand the genetic disorder of Hutchinson-Gilford progeria syndrome. Hutchinson-Gilford progeria syndrome is a disease that affects the lamin A on the LMNA gene. It can be diagnosed early in the fetus. It is a dominant disease caused by the mutation of the cytosine and thymine-based pairs. The physical expression of this genetic disease is apparent on the

affected individual with signs of premature aging, disproportional craniofacial, organ failure, short stature, and underweight. Researchers tested the most feasible progeria inhibitors, JH1, JH4, and JH13 to slow down aging associated with Hutchinson-Gilford progeria syndrome. JH4 was shown to have a 50% chance in binding to progeria, making it the most effective treatment for Hutchinson-Gilford progeria syndrome. Another study showed that the expression of the lamin A and C remained unchanged but the lamin A<sup>150</sup> expression increased. In conclusion, the lamin C showed to have had high concentration but lamin A and lamin A<sup>150</sup> also expressed the same concentration according to the research done in Camden with a fibroblast sample.

**Sweeney, Rachel, and Taylor Lawrence:**

Dr. Vinayak Mathur

School of Natural Sciences and Allied Health

"Exploring Horizontal Gene Transfer Based on Gene Annotation of Mycobacteriophage Schubert"

Our research project involves annotating the Schubert genome to better understand the relationship between mycobacteriophage and bacteria. The Schubert phage is isolated from the bacterium *Macrobacterium foliorum* NRRL B-24224 SEA and is 38820 bp long and has a GC content of 61.4%. The purpose of gene annotation is to identify the location of genes and their coding regions. Various software's such as DNA Master, Glimmer, Gene Mark, and HHpred are used to identify the genes and gene products within the Schubert Genome and how they play a role in infecting bacteria. We performed an analysis of horizontal gene transfer between the Schubert phage and *Macrobacterium foliorum* to identify genes that possibly could be shared between the two organisms. The results of this project will be available at the symposium.

**Taylor, Saralyn:**

Dr. Maria Elena Hallion

Engagements with the Common Good

"The Contribution of Gene-Environment Associations on Childhood Obesity"

The acceleration of childhood obesity and its growing presence nationwide can be attributed to many causes. From calorie intake, to lack of physical activity, and even excessive screen time, there has been a major cultural change within the last few decades allowing this epidemic of childhood obesity to continue growing. However, a person having obesity "in their genes" can seem inevitable for some. In the United States, 18.5% of children aged 2-19 are obese, these numbers are more than triple what they were in the 1970's. Studies have shown that 40-70% of variation in body weight within a population is due to heritable factors. It has also been proven that over 250 gene loci are susceptible for causing obesity. It is important to consider gene-environment (GE) associations in order to improve our understanding of how a child's genetic differences can cause them to be overweight or obese. This includes the child's genetic makeup as well as the effect of their environmental factors such as eating, exercise, and sleeping habits. By considering both sides of the spectrum and how both may influence each other, it is easier to understand a child's weight problem on a case-to-case basis.

**Tierney, Scott:**

Dr. Darryl Mace

School of Humanities and Social Sciences

"The Power of X: How Malcolm X Changed the World (By Any Means Necessary)"

The poster being presented examines the many ways that Malcolm X helped influence and shape the world we live in today. Multiple events and key periods in his life will be detailed and discussed and will be analyzed to determine what role they played in creating his ideologies and philosophies. Additionally, Malcolm X will be compared to other leaders of the time during the Civil Rights era. In this regard, his



messages and philosophies will be compared with those of others, and the poster will discuss why Malcolm X isn't as frequently discussed today as some other leaders. How American society and historians interpret his messages will also be discussed. The poster aims to showcase how Malcolm X's dedication, devotion, and fearlessness helped usher in new ideologies and ways of thinking that greatly influenced American society in the late 20th and 21st centuries.

**Tollerson-Irby, Zaraya, Justin Barbuda, Teddy Burton, Fernando Cornejo, ZaNae Dill-Blake, Haley Gruerio, Shaelyn Halter, Olenka Hladky, Nicole Holland, Daniel Junttonen, Nicholas LaBanca, Gabriella Moon, Brianna Morton, Agnes Reed, Kayla Ricker, Alex Sanchez, Nick Tilley, and Samantha Torres:**

Dr. Ruta Clair

School of Humanities and Social Sciences

"Mindful mediation as a class intervention to reduce stress"

Introduction: Research suggests that mindfulness meditation can benefit adults by reducing stress and improving resiliency. The literature indicates that mindfulness meditation may positively impact neural networks and build capacity for self-regulation (Lazar et al., 2005). Areas in the brain that mediate learning and emotional regulation show positive changes even after 8 weeks of mindfulness meditation (Taren, Creswell & Gianaros, 2013). Further, several studies have indicated that mindfulness practices can be particularly beneficial to college students (Yamada & Victor, 2012). College students report elevated stress and also appear to benefit from stress reducing practices. This study involves a single class studying neuropsychology. The students are both investigators and participants. The study explores whether a brief mindful meditation at the beginning of class has an effect on both physiology and perceived stress.

Method: As part of instruction concerning neuroanatomy and function in the Psychology 401 course, a brief mindfulness meditation component has been incorporated. At the beginning of class students rate their stress and determine their pulse rate. A 7-10 minute mindfulness meditation audio is played and the class engages in the practice. Immediately after the meditation stress and pulse data are measured for a second time. At week 12 the students who consent to participate in the study will pool their data in a deidentified data base and analyses will be performed to explore the effect of mindfulness meditation on both perceived stress and physiological response measured through heart rate.

**Tribett, Emma:**

Dr. Colleen Lelli

School of Education

"Accessible Technology for Students with ASD to Transition in the Workplace"

The purpose of this project is to create an effective approach using technology to help ASD students transition into a career working in a grocery store. A typical behavior or liking of people with ASD is the need for patterns and repetition, which is why a grocery store is an effective place of work. Throughout the research an app will be incorporated into the lesson plan to help teach concepts within the workplace, as well as, a digital book that includes what was covered in the lesson for further comprehension and as a tool to help once in the workplace.

**Washington, Zaria:**

Dr. Vivian C. Smith

School of Humanities and Social Sciences

"The Relationship between School Security Measures and Delinquency"

Of the 49 million students enrolled in the 2011-2012 academic year, 3.5 million students experienced in-school detention, 1.9 million students were suspended for at least one day, and 2.1 million kids under that age of 18 have been arrested in 2010 (Mallet, 2016). According to Kupchik and Farina (2016), zero

tolerance policies, expulsions, criminal justice-oriented security measures, and exclusion from the learning environment have become detrimental to the children enrolled in schools across America. The purpose of this study is to explore whether school security measures are related to the amount of delinquency in schools. The data for this study comes from National Crime Victimization Survey: School Crime Supplement, 2015 (N=9,372). The dependent variable is delinquency, and the independent variable is security measures. The results from this study could potentially educate school administrations to rethink their policies.

**Wattles, Schyler:**

Dr. John Cordes

School of Business, Arts, and Media

"Battling the Opioid Epidemic"

This study will be looking at the Opioid Epidemic in and around the Philadelphia area, and how to eradicate this issue all together. I will be conducting two research methods during this study, one being a survey and the other being a focus group. The survey will be handed out to various classes and students around the Cabrini University campus and the focus group will be conducted with a group of men at a sober living facility. The purpose of this study is to obtain the knowledge base that individuals have surrounding Opioid use and the epidemic this area is facing. I feel this is extremely important because it is a current issue that not only Philadelphia, but the whole country is facing. This study will help determine the knowledge around the epidemic as well as unveil underlying causes that can be helpful in eliminate the issue at hand. Results will be available for the Symposium.

**Wegner, Lydia:**

Dr. Maria Elena Hallion

Engagements with the Common Good

"It Takes a Village: Fighting Obesity, Working as a Community"

Community gardens and farms provide a way to combat obesity in children by helping build relationships between families and community and providing learning experiences about food, nutrition, and plants. Food and crops provide healthy options to eat, and can help families get fresh fruits and vegetables, along with healthy activity, and fresh air. CDC defines obesity in children and young people as BMI at or above the 95th percentile of children at the same age and gender. Community centers are providing safe places for families to get active and learn about proper nutrition. Food pantries are starting gardens to provide fresh fruits and vegetables to those who use their services therefore, improving family and community access to healthy food right in their neighborhood. Manna on Main Street in Lansdale, PA, serving the North Penn School district, has a community garden that is used to provide fresh healthy produce, and teach about nutritionally based options and how to prepare them. Community gardens are one solution to making progress towards ending childhood obesity.

**Woodruff, Ashley:**

Dr. Vivian C. Smith

School of Humanities and Social Sciences

"Effects of Defense Counsel on Sentence Length, and the Influence of Legal and Extralegal Factors"

Public defenders are often negatively viewed regarding their effectiveness in representing their clients. However, recent research shows that convicted offenders who were represented by public defenders often receive shorter sentences than those who were represented by privately retained or court-appointed attorneys. Additionally, studies have suggested other legal and extralegal factors as have significant influence on the relationship between defense counsel and sentencing outcomes. The present study used data from the United States Sentencing Commission to analyze the relationship

between type of defense counsel and length of sentence in federal court convictions. Additionally, it examined the influence of several legal and extralegal variables on sentence length. In corroboration with other studies, results showed that convicted offenders who were represented by public defenders received less sentence time in months in comparison to offenders represented by privately retained or court-appointed counsel. Additionally, the results showed that legally relevant factors such as mode of conviction and criminal history points, as well as extralegal factors such as sex and race had significant interactions with sentence length. The findings provide an argument for the need to take the influences of intervening factors into consideration when looking at type of defense and sentencing to more accurately assess significance and avoid erroneous conclusions.

**Wyche, Deanna, and Klaudia Walewska:**

Dr. Sheryl Fuller-Espie

School of Natural Sciences and Allied Health

"Down syndrome, a disorder affecting cognitive abilities and most commonly resulting in mental disability"

The purpose behind this specific research is to grasp a better understanding of the effects of Down syndrome (DS). DS is the number one cause of intellectual disability and is a genetic disorder caused by a partial or whole copy of a third chromosome 21. This occurs through nondisjunction or abnormal cell division, in either meiosis I or meiosis II. When a cell undergoes nondisjunction in meiosis and fails to properly separate, it can result in three copies of the chromosome as seen in this disorder. DS can also be developed through a Robertsonian translocation. This affects the fetus both physically and psychologically. One study conducted focused on the DCR-1 gene on chromosome 21 and in its influence on mental retardation that is associated with DS. Another study focused on differentially expressed genes in patients with and without Down syndrome. This allowed information to be gathered about what other genes may possibly be impacted by DS. This research is important in developing a further understanding of the genetic basis of DS and can help improve the treatments of those with this disorder.

**Yanez, Nicolas:**

Dr. Vivian C. Smith

School of Humanities and Social Sciences

"The Effect of Military Status on Criminal Justice Involvement"

Approximately 855 out of every 100,000 inmates are veterans. More than half of these veterans are incarcerated for violent offenses at 64% (United States Bureau of Justice Statistics, 2015). There are factors among the military veteran population that makes them more susceptible to incarceration (Beckham, Elgoben, Johnson, Newton, Straits, Vasterling, Wagner, 2012). The purpose of this study is to examine the likelihood of incarceration among individuals with military experience. The data comes from the 2004, Survey of Inmates (N=18,883). This data was collected through a questionnaire which asked if the inmates did or did not serve in the Armed Forces prior to incarceration. Roughly 9% of inmates surveyed had served in the Armed Forces at some capacity. A secondary data analysis will be conducted to obtain the results. This research can be used in order to bring to light certain cultural and occupational factors within the military that can negatively affect personnel after separation from the military.

## **Graduate Roundtable Presentations**

### **Altman, Adam:**

Dr. Michelle Yvonne Szpara

ED

"The Value of Library Innovations in Smaller Institutions of Higher Education: Leveraging Technology to Support the Academic Community"

The purpose of this ethnographically-informed phenomenology study is to consider how smaller educational institutions currently support their community through the academic library with research databases as well as to investigate the library's technological innovations. Perceptions from administration, faculty, students within the governance structure, and library staff will be included to address the concerns and needs for each stakeholder in terms of library resources. Discussion and reflection when identifying the similarities and differences of all these educational institutions will lead to a deeper understanding of the issues involved. Likewise, examining technology possibilities within a library setting can lead to innovations with technology, library space, and services. Therefore, the research questions are: 1) How do the perceptions of the library and its technologies differ between administration, faculty, students, staff, and library personnel at small institutions of higher education? 2) How can libraries at smaller academic institutions leverage technology in innovative ways to support their community? The pilot study involved faculty at one small university to answer five straightforward interview questions to determine how the participant performs online research and how much the participant knows about the institutions library resources. In continuance with the study, the author will preside at a roundtable to review what has been accomplished so far and to consider new interview questions. Discussion will address how to proceed with the study, including adding more constituents from other small institutions for in depth interviews and observations.

### **Andersen, Kimberly:**

Dr. Michelle Yvonne Szpara

ED

"Responsive Classroom Teacher Perspectives"

The social and emotional learning in school can be overlooked in this time of mandated testing but it has an impact on student attendance, student achievement, and carries over into the home. This study looks at one specific program, Responsive Classroom, that identifies as being evidence based to meet the social and emotional learning needs to improve not only school climate but also student achievement. The overarching research question being examined through this phenomenological study is: "What is the teacher perspective of the implementation of Responsive Classroom (RC) techniques?" A survey was offered to teachers who claim to utilize Responsive Classroom techniques. Through the survey feedback, the teacher perspectives on student attitudes, student behaviors, parent perceptions, along with positive and negative aspects of implementing the techniques are examined. Research from a 2017 meta-analysis completed by Collaborative for Academic, Social, and Emotional Learning (CASEL), a non-profit organization, schools who had social and emotional learning programs had "significantly improved social and emotional skills, attitudes, behavior, and academic performance" (Collaborative for Academic, Social, and Emotional Learning., 2017). Results of the teacher survey will be available at the Symposium.

**Arleth, Kim:**

Dr. Alia Sheety

ED

"Academic Outcomes in a High School Chemistry Class Using Standardized Tests"

**Avans, Kali:**

Dr. Michelle Yvonne Szpara

ED

"How Do Parental Involvement and Engagement Differences at the Pre-kindergarten and Kindergarten Levels in Urban, Low Socioeconomic Communities Affect Student Reading and Math Scores?"

Parents of students from Low Socioeconomic Communities need a variation of appropriate resources to assist them with parental involvement approaches while facing economic and societal hardship. The current narrative on expectations for parental involvement is largely modeled after middle class school-community relationships. In addressing this Bower and Griffin (2011) state, "as already demonstrated in the literature, these types of involvement activities fail to adequately cover parental involvement of low-SES families and families of color" (p.84). In addition, research strongly indicates that home-school involvement correlates with increased academic success for children at all levels of schooling: "[p]arent involvement includes a variety of behaviors and attitudes that families may exhibit that contribute to a child's school success" (Mendez, 2010, p. 26). A new narrative of what constitutes parental involvement for parents who fall under the low socioeconomic demographic needs to be illustrated. While research indicates that parental involvement correlates with improved academic outcomes, parents from low-socioeconomic backgrounds experience disadvantage because their circumstances often limit their ability and knowledge of ways to participate in their children's schooling. The proposed study seeks to explore low-income parents' experiences of parental involvement at both the Pre-K and Kindergarten levels, to better understand the dynamics they face in the home-school relationship. Pre-k Counts is a Pennsylvania Department of Education initiative in which high quality Pre-k programs are made accessible and affordable to at-risk families. Pre-k students are identified as those students between the ages of 3-5 years of age, who meet income guidelines, and may also be English-language learners, and/or have special learning needs (PDE, 2018). Kindergarten students typically are identified as children that are able to enroll in school if their 5th birthday falls on or before September 1st. The proposed study and current literature will be presented at the Symposium.

**Bialka, Jason:**

Dr. Alia Sheety

ED

"What's at Stake? Measuring Effort on Standardized State Assessments"

**Boyd, Christina:**

Dr. Michelle Yvonne Szpara

ED

"Effects of Media on Middle School Aged Girls' Self-Reflection"

This study was designed and carried out to show the potential correlation between use of media outlets and middle-school aged girls' own self-reflections. This study captures the stranglehold the media has on many of our students, and explains the constant need for perfection which our young female students try to achieve because of it. It is vital, as teachers, that we understand the inner workings of our students' self-esteem, in order to build confidence in other areas of their lives, so they can achieve a "whole-child" education while in our care. This study focuses on a racially diversified group of middle-school aged girls, grade 7, in a low socioeconomic school district. The young female students were given

survey questions on media use, self-esteem and internet habits, in attempts to capture a correlation between media use and unrealistic physical expectations placed on them through media platforms. I designed my study to explore the effects of media on middle-school aged girls in low socioeconomic status areas. Results will be available at the spring Research Symposium, after the conclusion of the study.

**Bradley-Cooke, Talia:**

Dr. Tricia Ehrensall

ED

"Navigating Head Start Policies and Procedures"

**Butville, Danielle:**

Dr. Michelle Yvonne Szpara

ED

"First Year Teachers' Perspectives on Inquiry"

The purpose of this qualitative research study is to investigate first year teachers' dispositions and practices after participating in a year-long inquiry-based program during their teacher preparation. Research will be collected through surveys, interviews, program artifacts, student work samples, and videos of seminars while intern were enrolled in a Professional Development School (PDS)partnership between a state university and public school district in central Pennsylvania. This study seeks to determine if graduates of an inquiry-based program enact the same dispositions and practices during their first-year teaching. The findings from this study will help inform teacher preparation programs and review utilizing inquiry as a teaching tool and stance towards teaching and learning.

**Campbell, Susan L.:**

Dr. Michelle Yvonne Szpara

ED

"Teachers' Perceptions of Teacher/Student Relationships and their Impact on Student Behavior and Academic Outcomes in Low-socioeconomic Schools"

This study examines the teachers perceptions of relationships with students and its impact on student behavior and academic outcomes. The goal was to ascertain whether the relationships between teachers and students have an impact on student achievement in low socioeconomic schools. Participants were chosen to represent three different grade levels as they pertain to student social, emotional and academic development. The end goal was to offer opportunities to further evaluate the need for future studies that may support professional development opportunities and a greater understanding of student needs within low socioeconomic schools. Through an interview process I will examine the impact of teachers self-reflective evaluations on fostering relationships with students. The results of the study are not yet available and will be available for review at the Symposium.

**Carter, Crystal:**

Dr. Michelle Yvonne Szpara

ED

"In What Ways does a High-stakes, Standardized Biology Assessment for Secondary-school Graduation Affect Teachers' Pedagogical Choices and Curriculum Domain Analyses, When Teaching in an Under-resourced Urban District with Students from Low-income and Mino"

The following is a qualitative study that explored how a high-stakes, standardized biology assessment for secondary-school graduation affect teachers' pedagogical choices and curriculum domain analyses when teaching biology in an under-resourced urban district with students from low-income and minority

backgrounds. The Biology Keystone exam is a standardized test administered to ninth grade students in May and is currently a graduation requirement. The purpose of this study was to examine how teachers perceive what they teach and how they teach is being altered due to the administration of the Keystone exam. Furthermore, this study should be viewed through the lens of how students acquire and retain knowledge. This study is significant because research shows that standardized testing has a significant influence on science teachers' instructional and assessment practices in ways that are counter to the learning goals promoted by science education reformists (Aydeniz, M., & Southerland, S. 2012). So, it is imperative that teachers can anonymously express their feelings and beliefs towards this standardized test without the fear of jeopardizing their career. For the purposes of this mini study, a survey was administered to the Biology department of a high school in Pennsylvania. Seven teachers received the survey and four responded. After careful analysis three themes emerged from the data. First, standardized exams do not ultimately express a student's knowledge of course material for a school year. Secondly, standardized exams create a considerable amount of pressure for students. Lastly, the Biology Keystone exam has negatively influenced curriculum and instruction by negating teacher choice in activities and topics.

**Conroy, Taryn:**

Dr. Tricia Ehrensall

ED

"Sketching the Ethic of Care in Educational Leadership"

**Dickinson, Mark:**

Dr. Jennifer Gaudio

ED

"Increasing Engagement in Online Learning through Visual Instruction"

Teachers in cyber schools have unique challenges engaging cyber school students. The purpose of this research is to study the impact that visual instruction, specifically short videos, have on the engagement of cyber school students with their assignments. The intended goal of this study was to improve engagement and mastery of assignments for students enrolled in this online school. The students being examined are Pennsylvania high school students enrolled in a Government and Economics course. Videos were implemented in the instructions of two assignments in this online school. Data from these assignments was analyzed qualitatively and compared against other assignments from the same class, as well as the same assignment from the previous year. Student self-reflection responses were also incorporated in analyzing the impact that videos have on student engagement. The final results of this study presented at the Symposium will be valuable to others looking to increase student engagement in cyber school or online learning environments.

**DiMichele, Kathleen A.:**

Dr. Michelle Yvonne Szpara

ED

"Youth Perceptions of Challenges and Supports in Middle School for LGBTQIA Students"

The purpose of this project is to examine youth perceptions of the supports and challenges present in middle school from the perspective of college students for Lesbian, Gay, Bisexual, Transgender, Queer/Questioning, Intersexual, Asexual (LGBTQIA) identifying students. A survey will be emailed to university students, containing 15 multiple choice and open-ended response questions. The current legislative environment is leaving the policy-making for LGBTQIA students in public schools and Universities in the hands of the states, who are inclined to defer to the individual districts. This makes the necessity for extensive, quality qualitative and quantitative research essential and timely for policy

makers, students, and the community. The method of qualitative data collection is a good fit, aligning with my propensity to storytelling, educational policy implications, and the questions that may emerge; the qualitative method will be narrative, and interpreted through a critical framework (Creswell, 2013; Maxwell, 2013). This methodological approach to inquiry will, as Creswell (2013) states, “Start with assumptions of power and identity struggles, document them, and call for action and change” (p. 37). The current literature and study progress will be shared at the symposium.

**Gibbs-Tapper, Deborah:**

Dr. Michelle Yvonne Szpara

ED

"A Comparative Study of School Responses to Child Bereavement and Loss in the Event of the Death of a Classmate"

**Hale, Jennifer:**

Dr. Michelle Yvonne Szpara

ED

"Courageous Conversations: Teachers' Perspectives about the Students They Teach"

Studies on the preparation of pre-service teachers suggest that they are not adequately prepared to interact with students from diverse backgrounds. The purpose of this qualitative study was to examine how Courageous Conversations can shift the perceptions or biases that teachers may or may not have about minority students from low socioeconomic backgrounds. By utilizing surveys and a focus group discussion, novice and seasoned teachers will share their beliefs and experiences of working with minority students from low socioeconomic backgrounds. Findings from the surveys and focus group discussion highlight the importance of this type of dialogue to influence a more in-depth understanding that teachers have of the populations they serve. By exploring these perceptions through this type of open discussion can shift the thinking the teachers have which will lead to a better understanding of the students, parents and their community. The information gathered from the data sources will also provide information for low performing public schools who struggle with finding strategies for increasing teacher attrition and aiding teachers, especially novice teachers with building stronger relationships with the students and parents in their school.

**Heft, Elizabeth:**

Dr. Michelle Yvonne Szpara

ED

"The Emotional Impact of Inclusion on Teachers: A Pilot Study"

Inclusion is a popular term. The concept is not new; it has been part of United States' educational policies for over fifty years. Current research focuses on teacher attitude and training in regard to inclusion. There is limited research exploring the emotional impact of inclusion on teachers, in particular, general education teachers in the United States. The purpose of this grounded theory study is to understand the emotional impact of inclusion on general education teachers at the elementary school level. Four teachers, grades 1 and 2, were individually interviewed. In examining the data collected, I discovered a pattern of teachers questioning their decision to remain in education when faced with the emotional stresses related to their feelings of inadequacy, as well as the toll on their physical and mental wellbeing when providing an inclusive learning environment. The results suggest that more needs to be done to prepare and support general education teachers for meeting the needs of diverse learners but also to address the emotional management needs of the teachers themselves.



**Henzie, Lauren:**

Dr. Michelle Yvonne Szpara

ED

"How Do the Academic and Social/Behavioral Outcomes of Kindergarten Students Differ in the Morning vs. Afternoon Programs?"

As many schools are moving towards full day Kindergarten programs, some schools remain a half day program. Those that remain a half day program are held to the same academic standards as those who have much more time during the day in a full day program. This study's research question states, how do the academic and social/behavioral outcomes of Kindergarten students differ in the morning vs. afternoon programs? This research was conducted during the fall of 2018 and spring of 2019 at O Elementary School. 12 students participated in the study. The focus of the study was on using the assessments already in place and then reviewing the results based on time in attendance. Also, the study looked at the social/behavioral actions of students and if time of day plays a role. The methods include looking at the differences between the morning and the afternoon classes in the beginning of the year, using letter naming/sound recognition data. The data will be analyzed, and then strategies will be put into place to see how this affects the writing domain. Observational data will be collected on a group of students in both the morning and afternoon classes, who have behavioral needs. Specifically the study looks at the ability to focus during whole group instruction time. The results of the study will be available at the symposium.

**Houston, Kelly:**

Dr. Michelle Yvonne Szpara

ED

"Math Anxiety and the Flipped Classroom"

The purpose of this phenomenological study is to discover how learning in the flipped classroom model impacts math anxiety at the middle school level. The researcher noticed that many of the studies that have been done about flipped classrooms have all focused on academic achievement and there seemed to be a gap in the literature when relating this style of learning to mathematics anxiety. Flipped classrooms allow for students to begin to create an understanding of the material prior to the class meeting. The flipped lessons usually occur at home utilizing some type of technology. The participants of this study are five seventh grade students that have identified with the common feelings of mathematics anxiety: tension, fear, apprehension, and dread. These volunteers participated in focus groups prior to and after four lessons delivered using the flipped classroom model. This study utilized focus groups and observational field notes to determine common themes among the students' experiences relating to mathematics anxiety. The researcher found the themes of past experiences with math teachers, increased confidence, and an increase in comfort level to be the most prevalent in this study. These themes could identify the initial triggers of math anxiety as well as possible strategies to alleviate the stress that many students struggle with on a daily basis.

**Hurd, Loralie B.:**

Dr. Michelle Yvonne Szpara

ED

"Impact of Personalized Learning on Student Math Confidence"

The structure of the education system has changed relatively little since its foundation over one hundred years ago. Despite this, the needs of students and society have changed a lot over the years. This has led to a need to change in instructional strategies. Personalized learning has begun moving forward in education as a means of meeting diverse student needs. Current research shows that it can have many benefits, including better learning for students. This qualitative study explores the impact

personalized learning can have on student confidence in math. Five fourth-grade students in a personalized math classroom were interviewed. Results are not yet available but will be available at the Symposium.

**Johnson, Kyle:**

Dr. Michelle Yvonne Szpara

ED

"Formative and Summative Assessment Driving Teacher Instruction at the Elementary Level"

This study explored how formative and summative assessment can inform teacher instruction. I conducted this study over the course of 6 months in the fall and winter of 2018 and 2019 with my class of 25 fifth grade students. The study was conducted at R Elementary School. The driving purpose of this study was twofold: (1) if and how formative and summative assessment could inform a teacher's instruction, as well as (2) the productivity and effect of formative assessments on eventual summative assessments. I first started off by explaining to my students the difference between a formative and summative assessment, since they may not have been familiar with those terms before. My study was compiled of student-answered questionnaires, student surveys, as well as focus groups of which the application of formative assessments were applied to some, but not all of the group.

**Jolly, Nicole:**

Dr. Michelle Yvonne Szpara

ED

"Instructional Coaching Impact on Teacher Efficacy"

**Kearney, Jr., Dennis B.:**

Dr. Michelle Yvonne Szpara

ED

"Assessing the Impact of a Multi-member Mentor Intervention Group for High-risk Middle School Students"

The academic, social, and emotional growth of students at Forrest Hills Middle School (FHMS) is the driving factor that helps to guide decision-making on a daily basis (UDSD, 2019). Currently, all of the students at FHMS receive a Tier I level of support through the Positive Behavioral Supports and Interventions (PBIS) program. Students that present with a myriad of behavioral infractions that impede their learning receive a Tier III level of support that includes a daily 48-minute mentoring period with a teacher mentor. During this period, students review behavioral expectations, create academic goals, and have access to positive supports through a trained teacher. In this study, I have gained parental and student consent to match three students (one 6th grade, one 7th grade, one 8th grade) with a multi-member Tier III mentor group. These groups consist of a teacher mentor, grade-level administrator, grade-level counselor, and grade-level lead teacher/ disciplinarian. Through interviews at the beginning and end of the study, I will explore the impact of the increased access of adult support. The purpose of the phenomenological study is to understand the impact of assigning middle school students a multi-member mentor group as a Tier III intervention to help them navigate academic, social, and emotional issues. It is my belief, supported by the current literature, that the fostering of these relationships will greatly improve the students' perception of school, and ultimately decrease behavioral infractions, while increasing student achievement. The results will be available at the Symposium.

**Laffend, Karin:**

Dr. Michelle Yvonne Szpara

ED

"Perceptions of Students from Low-Income Backgrounds on Preparedness for Transitioning to High School"

This phenomenological study aims to gain insight on the students' perception of their preparedness upon entering high school. The participants of this study attended a low socioeconomic charter school for sixth, seventh, and eighth grades (middle school), and attended private, parochial, or out-of-district schools for high school. The researcher uses a series of questions and probes during individual interviews to create a narrative describing the obstacles and successes of the transition. Perhaps in understanding the students' perception of their preparedness, we can further understand the effect of the achievement gap in regard to continuing education. Results will be available at the Symposium.

**Lamarr, Ism'il Ar-Rahman, MS:**

Dr. Michelle Yvonne Szpara

ED

"Homework Barriers and Supports for At-risk Students in Transitional Schools"

**Lewis, Ryan:**

Dr. Michelle Yvonne Szpara

ED

"High-stakes Test Accountability: Elementary Special Educator Stress and Self-efficacy Levels"

Education accountability policies heavily reliant upon high-stakes testing (HST) outcomes can "contribute to a variety of negative psychosocial outcomes for teachers" (Saeki, Segool, Pendergrast, & von der Embse, 2018). A problem that exists is the unintended consequences of HST on elementary special education teachers, who instruct students with specific learning disabilities. Understanding how HST impacts elementary special education teachers can provide information for teachers and administrators to ensure an optimal learning environment is maintained throughout the school year. An investment in understanding stress and self-efficacy levels of elementary special education teachers, is an investment in the learning process for all stakeholders, including the students. The purpose of this study is to investigate the impact that HST has on elementary special educators' (learning support teachers) well-being, through stress level and self-efficacy inventories. This study employs the lens of social constructivism, in seeking themes identified through teacher inventories and interviews, to gain a deeper understanding of how HST impact elementary special education teachers' stress and self-efficacy levels, during the testing window. As phenomenological research "lies somewhere on a continuum between qualitative and quantitative research" (Creswell, 2013, p. 78), data collection tools include prevalidated survey inventories and interviews. The goal of this study is not to obtain generalizable findings; however, it is to present an authentic insight into how elementary special education teachers' stress and self-efficacy levels may be affected by the HST environment. Results of the study will be presented at the 2019 Cabrini Symposium.

**Long, Tia S.:**

Dr. Michelle Yvonne Szpara

ED

"How Does the Cultural Background of School Principals Inform their Leadership Practices?"

The purpose of this research is to explore how the cultural background of school principals inform their leadership. Since 1995, there has been a closer look at culturally relevant or culturally responsive teaching. This idea has helped shape the way teachers improve their pedagogical practices in relation to

minority students. With the idea of improving teacher's cultural awareness and culturally relevant teaching, this research plans to explore how leaders' cultural background, not only informs their leadership but also how principals are making their leadership culturally relevant to the students they serve. This qualitative phenomenological study will seek to interview an estimate of 6-15 principals of differing races. The interview will consist of questions around cultural background, race, leadership and practice, as well as being a culturally responsive leader. The proposed study and current literature will be shared at the Symposium.

**Maddox-Matthews, Michelle:**

Dr. Michelle Yvonne Szpara

ED

"Study of Minority Novice Teacher Perception on Preparatory Programs"

**Mallaghan-Rasco, Suzanne:**

Dr. Michelle Yvonne Szpara

ED

"Experiences of First-Generation Female Identifying Undergraduates"

This phenomenological study was designed to explore and describe the experiences of current first-generation female/female identifying students in regard to self, family, and on campus experiences. It is well known a first-generation student experiences more difficulties in attaining an undergraduate degree; the purpose of this study is to explore supportive factors that may assist in this process. Methods involved the assistance of the Director of the Diversity Office on a small private university campus. The director distributed flyers that the author had made. The request for female participants was distributed through social media, and as students heard about the interviews through the office, the sample constitutes a Networker sample. The instrument's open-ended questions were piloted with an older first-generation female. Responses to the questions were reviewed with respondents, verified, and clarified. All data is confidential; any names mentioned are pseudonyms. This is a short study completed for class, therefore time limitations are a factor. Small sample size, the location of one small private university in the northeastern U.S. are also restraints. Delimitations include the focus of this paper is on females/ female identifying students who are the first in their immediate family to attend university. The intent was to primarily focus on undergraduates, but a master's degree student wished to participate and was also interviewed. Throughout this paper I will explore the positive and negative experiences female students have shared and the common themes that have enabled and supported them to achieve their goals of graduating despite impediments.

**Moore, Chaka:**

Dr. Tricia Ehrensall

ED

"Classroom Perspectives from Queer Students of Color (QSOC) at Two-year Colleges"

**Odom, Vanessa:**

Dr. Lyn Berenato

ED

"A Qualitative Examination of Arts Integration and African American Fifth- and Sixth-Grade Male Students in a Public Arts School"

**Parris, Jaime:**

Dr. Michelle Yvonne Szpara

ED

"The Role of the Community Members in a Child's Educational Experience: How Have Community Members Provided Support, if at all, for Students who are Attending College?"

This study will examine the role that community members play in a child's educational experience to help them to the path of graduation. Research has shown that students in poverty need additional assistance to overcome the situations they are facing while dealing with poverty. While understanding what the research has proven, the goal of the study is to examine any themes that arise among the students who have graduated from high school and now attend college, and who are still or were living in poverty. This study will include a retrospective reflection with recent college students who will be participating in an interview with the investigator. The interviews will last approximately ten to fifteen minutes in March of 2019. The interviews will be conducted on the phone at various times and dates. The primary investigator will transcribe the interviewee's responses to the interview questions. The primary investigator will look for themes and consistencies amid the different perspectives in order to assess students' experiences leading up to graduation and in identifying what support they received from outside resources.

**Perazzelli, Jill:**

Dr. Jennifer Gaudio

ED

"Cell Phone Collection: Improving Learning Culture Through More Efficient Cell Phone Management Procedures"

Cell phones have become the plague of most educational institutions. Teens, in particular, seem to have a difficult time refraining from cell phone usage within the classroom. Inner city public schools have been reluctant to embrace cell phone technology in the classroom due to fear of academic dishonesty, cyber bullying and coordination of fights in school. Teachers are forced to play the role of enforcer with varying degrees of success when the school insists students are not allowed the use of cell phones, but offer no means of support in the follow-through. One possible solution for teachers is the usage of a shoe rack to collect and organize cell phones within the classroom. The first part of this small qualitative study follows 6 teachers as they implement a voluntary method of cell phone collection within their classrooms, and their perspectives on the effects on student academic performance and student-teacher relationships. When the school itself does decide to support the rule of no cell phones by Administration collection, the teacher is free to focus on student learning. The second part of this study looks at teachers' perspectives of academic progress and student-teacher relationships when school Administration collects cell phones before the entrance to school. Results from this study may benefit teachers and schools interested in improving student learning through removal of a distraction to the learning environment and climate.

**Pollard, Natasha:**

Dr. Alia Sheety

ED

"Social Networking Participation among Adolescent Girls and Effects on their Self-esteem"

**Quattlebaum, Nathaniel:**

Dr. Michelle Yvonne Szpara

ED

"Teacher Perceptions of Girls' Achievement in Math"

**Regrut, Angela:**

Dr. Colleen Lelli

ED

"Utilizing Communication and Conflict Resolution Skills to Support the Needs of Co-teaching Teams"

**Sacharok, Gregory:**

Dr. Michelle Yvonne Szpara

ED

"Examining the Impact of High-stakes Testing (HST) Accountability Evaluations on Subject-Area Teachers Serving Grades 3 to 8 in Pennsylvania"

Some elementary and middle school testing teachers are finding it difficult to remain motivated, dedicated, and committed in their career, especially when faced with the accountability of high-stakes standardized tests [HSTs] (Baker, Barton, Darling-Hammond, Haertel, Ladd, et al., 2010). This study will give insight into the struggles of stress, anxiety, and lack of motivation among subject-area testing teachers in grades 3 through 8 due to federal and state-mandated goals for student learning outcomes on high-stakes tests. The researcher aims to examine a gap in education discourse related to the challenges faced by elementary and middle school teachers who experience doubt in their commitment to the profession because of the evaluative nature of the HSTs for subject-area testing grades 3 through 8. The question driving this study is: How do stressors related to HSTs in grades 3 through 8 contribute to subject-area testing teachers' decisions to stay or leave the profession in urban public schools in Pennsylvania? A grounded theory methodology, informed by ethnographic approaches, will utilize extensive written and videotaped semi-structured interviews, and focus groups, of subject-area testing teachers in testing grades 3 through 8. Ethnographic areas of inquiry may include but are not limited to, stressors associated with HSTs and a teacher's commitment to the profession.

**Speicher, Charles:**

Dr. Michelle Yvonne Szpara

ED

"Teacher Perception of Strategies as They Impact Motivation in Students from Low Income Backgrounds"

Student motivation through the teacher's lens has not been vigorously researched. The need for this study presents itself in data indicating high levels of students from low income backgrounds are achieving at rates lower than their suburban peers (Cummings, 2012; Gorski, 2016; Ford, 2017). Challenges facing youth from low income backgrounds are noted as an issue in their motivation to remain in school. This qualitative study will examine 18-22 teachers' and instructional coaches' perceptions of instructional strategies that motivate students from low income backgrounds to participate in learning. The sample size is in alignment with recommendations for conducting a phenomenological study according to Creswell (2015) and Morse (1994). The demographics will be predominantly minority students with 80% of students identified as at or below the federal poverty level. The information derived from the study could be used for possible recommendations for professional development and will expand the body of literature on teacher voices. Interviews and focus groups will be completed in a school district considered to be under-resourced, within the Northeastern United States. Teachers involved in data collection, as a convenience sample, will have between 7 and 25 years of experience in grades K through 6. Student motivation can lead to higher levels of post-secondary education with the goal of being productive members of society (Blackwell & Pinder, 2014). The focus of this study will be to gain an understanding of instructional strategies perceived as having the most impact on students' motivation.

**Sterling, Tracey:**

Dr. Michelle Yvonne Szpara

ED

"Analysis of How Professional Development on Culturally Responsive Teaching Impacts Teacher Practices and Student Expectations"

Students in increasingly diverse public schools in the United States present challenges for educators to discover varied and culturally sensitive instruction and pedagogy. The growing diversity in our nation's schools mandates a need for culturally responsive teachers who understand the important relationship between social behavior and a student's culture. Culturally responsive teaching values a student's identity, background, and cultural references in order to create meaningful learning environments. The purpose of this qualitative study was to determine how professional development on culturally responsive teaching impacts teacher practices and student expectations. The participants of this study consist of 2 high school special education teachers who teach students of color. Each teacher was interviewed, participated in a district-wide in-service on culturally responsive teaching, observed during a class period using a culturally responsive checklist, and then interviewed again to determine the effectiveness of culturally responsive professional development. The results indicate that teachers can transform their pedagogy with high expectations, contextual learning, and culturally mediated instruction.

**Washington-Freer, Chappelle:**

Dr. Michelle Yvonne Szpara

ED

"How Does Participation in the PHEAA Act 101 Program Promote Student Success for African American and Latino Male Commuter Students at a Private, 4-year University?"

The purpose of this study is to determine how participation in the PHEAA Act 101 program promotes student success for African American and Latino Male commuter students at a private, 4-year University. To discover recommendations, in-depth interviews will be conducted to find what contributes to the success of the population. A demographic survey will be conducted as well prior to the in-depth interviews, to be used as supporting data. The Academic Discovery Program serves an "economically disadvantaged" population and is ranked number one as an ACT 101 Program by PHEAA. The proposal outline and current literature will be presented at the Symposium.

**Williams, Kimberly Karamoko:**

Dr. Michelle Yvonne Szpara

ED

"An International Comparison of the Educational and Social Supports for Low-income Minority Students in Canada and the United States"

This qualitative research study examines the experiences of self-identified low-income US and Canadian minority students and the impact of the educational and social supports in their home countries. This study sought to research why minority students from low-income households in Canada experience more direct paths to higher education than students in the US. Understanding the variables that impact the differences in student experiences, allows for the potential implementation of effective program practices and support systems in US schools. Three self-identified low-income minority American students and three self-identified low-income minority Canadian students were asked a series of questions. The purpose of these questions was to gain an understanding of the hardships experienced and compare the support systems available. Narrative analysis was used to analyze responses. Findings showed that Canadian students felt more prepared for college despite their socio-economic status. Variables that attributed to their feeling of preparedness included course accessibility, affordability of

college, and self-motivation to change their family's financial situation. American students felt they were less prepared for college due to their socio-economic status. Variables that attributed to their feelings of lack of preparedness included lack of academic support from teachers and administrators, preoccupation with working to support their family, and the lack of understanding of the college application process. Both sets of students agreed that family upbringing and social issues within their communities impacted their academic paths. Student responses support existing research that there are stronger educational support mechanisms in place for minority low-income students in Canada.

**Wood, Derrick C.:**

Dr. Michelle Yvonne Szpara

ED

"The Influence of Coaches on Female STEM Identity in Science Olympiad"

This phenomenological study investigates the influences that coaches have on the development of STEM identity for female students participating in the Science Olympiad. Current research indicates that the formation of a strong STEM identity is essential for females, and participation in STEM extracurricular activities has shown some promise for enhancing students' STEM identity. One of these activities, Science Olympiad, enjoys the participation of over 240,000 students in the United States every year and exhibits the core characteristics of STEM identity: STEM interest, self-concept, and the influence of role models. Despite its broad adoption over the past 35 years, there is little research on the efficacy of these programs for enhancing STEM identity formation. Science Olympiad coaches from rural, suburban, and urban schools were solicited for interviews, representing a variety of demographics to uncover common themes. The results showed that their influence on females was subtle, and most often not explicit. The coaches did not operate from an equity approach, but reported encouragingly high participation rates among females. Although tacit, the coaches influence as STEM role models had profound impacts on the other two aspect of STEM identity. The fundamental structure of Science Olympiad, which incorporated 21st century skills such as collaboration and competition as well as events across the domains of STEM, enhanced STEM interest and self-concept. Thus, it is essential that coaches step into the positions of STEM role models to allow for the negotiation and production of a positive STEM identity for students, especially females.

**Yarosh, Kendall:**

Dr. Jennifer Gaudio

ED

"Mastery of Math Vocabulary"

Math content vocabulary mastery is of growing importance as there is a heavy emphasis on reading and vocabulary within math state assessments. Without vocabulary mastery students struggle to achieve content mastery. The purpose of this project was to research what direct and/or indirect teaching strategies create student mastery of math vocabulary. Additionally, this study explored the impact student math vocabulary mastery has on student performance within the math unit of study. A review of the literature confirmed the importance of math vocabulary instruction in the classroom as well as its impact on student content performance. Additionally, a review of best practices in vocabulary instruction helped guide the design of vocabulary instruction to be implemented as an intervention. To conduct the intervention, prior to the unit students were given a pre-assessment of the vocabulary words. The direct methods of instruction included explicit direct instruction of the math vocabulary, group work/practice time with the vocabulary words, and a Kahoot review quiz game. Indirect methods included activating prior knowledge, visualizing, and personalized student options for practice. Data was collected through three methods: a researcher's observation journal, student exit tickets following each strategy, and a post assessment of the vocabulary words with a word bank. Qualitative analysis was



conducted to evaluate the impact of these strategies. The results of the research will guide future instructional design to improve student mastery of math vocabulary and student performance in math.

**Young, Sandra:**

Dr. Michelle Yvonne Szpara

ED

"Philanthropic Motivators of Alumni from a Catholic University"

## **Graduate Poster Presentations**

### **Belardo, Alyssa:**

Dr. Jennifer Gaudioso

ED

"Teaching Text-Dependent Analysis: Developing an Evidence-Based Instructional Design"

Starting in the 2017-2018 school year, the PSSAs began to assess students on their writing using Text Dependent Analysis (TDA) prompts, a type of assessment previously only used as part of reading assessment. The weight and importance of TDAs increased with the focus on ensuring students are College and Career Ready. Although the change in PSSA writing prompt is still a rather recent change, it is important that teachers look for resources that have visible proof of success with ways of teaching Text Dependent Analysis. The goal of this study was to evaluate different courses of action that schools, districts, and organizations have taken to adapt to teaching analysis or TDA prompts in the classroom. After assessing multiple strategies, trainings, and professional development opportunities that have proven to be effective in a classroom setting when teaching students analysis, common themes that emerged were used to determine most effective practices across the research. The purpose of this study is to develop a set of research-based strategies that can be recommended to teachers as a curricular resource as they transition into teaching analysis in the classroom. This will ultimately help prepare teachers and students for the upcoming English Language Arts PSSAs, and more importantly, to help teachers ensure students have the skills required to be ready for college and careers.

### **Christman, Andrew:**

Dr. Jennifer Gaudioso

ED

"High-Impact Strategies in Eighth Grade Math"

In many districts, students struggle with performance in math. In the site of this study, student scores lagged behind neighboring schools. This study focused on mastery of several complex math topics typically covered in the spring of eighth grade. The purpose of this study is to improve student performance in math, and develop guiding recommendations for implementing high-impact strategies to increase student learning in math. The strategies selected for the intervention emerged from the research on high impact instructional strategies to support student learning in math. The strategies used in the intervention included the following: clear learning intentions and success criteria, reciprocal teaching, inquiry-based teaching, spaced practice, and worked examples. This study explored the effects of research-based math instructional strategies on student mastery in math. Baseline data was collected before instruction. Student seating adjustments were used to optimize opportunities for students to learn and work with others in reciprocal teaching activities. Selected problems were used for targeted spaced practice, and anchor charts of worked examples provided learning aids for students. Data collected included formative assessments, observation data, student summative assessments, and student learning reflections. Qualitative and quantitative analysis evaluated learning growth and behaviors within the unit as well as performance growth compared to previous units when the intervention was not in place. Results and recommendations shared at the Symposium may guide other teachers and schools seeking to improve student learning and mastery in math.

**Graham, Gabriela:**

Dr. Michelle Yvonne Szpara

ED

"The Impact of Reading Intervention for 7th Grade Students who are Identified as Needing Literacy Support"

This study, "What is the impact of reading intervention for 7th grade students who are identified as needing literacy support?", explored the effect of reading intervention for students who are identified as needing literacy support. This study was important to me as a special education teacher because we work with our students to improve on and master their goals. When students master their goals, they are moving toward independence and less individualized plans and attention. I worked with my colleagues to come up with plans for particular students who were not reaching their reading goals. Their goals consist of reading comprehension and fluency, as they are all able to decode. These students who were involved in the study are all in special education learning support. I conducted this research during the fall of 2018 with eight 7th grade students at Happy Valley Middle School (pseudonym). I observed a reading specialist teacher who taught these students specific strategies and tools using research-based programs and teacher-made assignments to improve their reading fluency and comprehension. This is the first year this school implemented this "Reading Techniques" class. Their progress and improvements were monitored weekly and instruction was tweaked specifically for those students. I compared their previous years' achievement scores such as Measure of Economic Progress Test (MAP) MAP and Pennsylvania System of School Assessment (PSSA) test data, progress monitoring of their reading goal data, and English Language Arts class grades, as well as their scores from reading techniques class. Results will be made available at the Symposium.

**Luzak, Jason:**

Dr. Jennifer Gaudio

ED

"The Impact on Ungraded Assessments on Self-Efficacy and Mastery of 8th Grade Eligible Content"

Can students increase their mastery of mathematical content through improved self-efficacy? More than 50% of the students in my Algebra 1a class fail the Keystone exams after they complete the Algebra 1b curriculum in 9th grade. Many students believe they are "just bad at math" or "stupid," and they are set up for failure by a curriculum that moves too quickly and an alpha-numeric grade system that reinforces they are failures. This study seeks to determine if improved self-efficacy, an individual's judgments of his or her capabilities to perform specific actions, will result in greater effort in mastering eligible content and willingness to demonstrate mastery on standards based assessments even after a chapter has been completed. This will be determined by documenting mastery of eligible content in an ungraded classroom for one marking period (three chapters of content) through student reflections completed at the end of each chapter, tracking the willingness of students to take assessments in material they have previously not yet mastered, and comparisons of PSSA scores with other ungraded classroom over the past 2 years. Results of the analysis will be available at the Symposium. More than 50% of the students in my Algebra 1a class fail the Keystone exams after they complete the Algebra 1b curriculum in 9th grade. Many students believe they are "just bad at math" or "stupid," and they are set up for failure by a curriculum that moves too quickly and an alpha-numeric grade system that reinforces they are failures. This study seeks to determine the impact of an ungraded, or mastery-based, classroom on improved student self-efficacy, effort and mastery of eligible content in Algebra. This study will explore student willingness to demonstrate mastery on standards based assessments even after a chapter has been completed. Data collection will include documentation of mastery of eligible content in an ungraded classroom for one marking period (three chapters of content), student reflections completed at the end of each chapter, tracking the willingness of students to take assessments in

material they have previously not yet mastered, and comparisons of PSSA scores of an ungraded classroom pilot over the past 2 years. Qualitative analysis will be conducted to evaluate impact of the instructional strategy on student self-efficacy and mastery. Results of the analysis will inform continued practices in mastery-based approaches in Algebra. Study results and recommendations shared at the Symposium may be beneficial for teachers hoping to increase student self-efficacy or mastery in math.

**McCandless, Kristen:**

Dr. Jennifer Gaudio

ED

**"Mathematical Vocabulary in Support of Student Learning"**

In an Algebra 2 class, the language of mathematics is a challenge because it is not used outside of the learning environment. The students were having a problem with using mathematical vocabulary to explain their thinking. With the overall problem of using mathematical vocabulary, the students were not able to describe their learning or the process of problem solving. The purpose of this study was to use multiple different strategies to increase the use of vocabulary in the math classroom so that the students may be more successful. This study was intended to uncover whether mathematical vocabulary and understanding of content will increase through supplemental strategies. In addition, this study examined if the increase of vocabulary results in increased performance. The students were provided with multiple different tools to increase vocabulary including different graphic organizers and increased group discussions. Each week, the students were expected to use a different vocabulary method. The Data was collected through error analysis, a rubric for mathematical talk, self-assessment, and written explanations of mathematical processes on assessments. Math teachers will benefit from this research because they will be able to see which methods work best to increase vocabulary use. Students will also benefit from the increased use so that they may more successful in the math classroom.

**McKenna, James:**

Dr. Michelle Yvonne Szpara

ED

**"A Study in the Use of Close Reading Strategies to Address High School Math Word Problems"**

This study investigated the use of close reading strategies to solve high school math word problems. I conducted this research during the fall semester of the 2018-2019 school year with my 10th grade Algebra I class at DD High School (pseudonym). There were 44 participants in my study who were all part of my two 10th grade Algebra I classes. The focus of my study was on teaching students how to use specific close reading strategies when solving math word problems. My goal of this study was to improve my students' confidence, and ability to solve math word problems. I began by gauging my students' thoughts on math word problems in regards to their purpose, and the students' feelings on their overall ability when solving word problems by having the students complete a questionnaire. Then I introduced and taught a specific close reading strategy. After days of direct instruction and practice using this strategy, the students were given a formative assessment consisting of a set of word problems to solve. After this assessment, the students were given a survey giving their opinion on how beneficial that specific strategy after they solved those word problems. This sequence was repeated two more times with two other close reading strategies. After all three strategies were taught and practiced, the students were given the questionnaire they completed in the beginning of this study again. This data was used to study the effectiveness of the close reading strategies used to solve math word problems.

**Miller, Carissa:**

Dr. Vinayak Mathur

NSAH

"Annotation of the Phage Genome ArMaWen"

Bacteriophages are viruses that infect a host bacteria or archaea by infecting its genome and reproducing with the hosts DNA. Many phages are resistant to conventional antibiotics and have been under study to determine a path of resistance or cure for its host. A member of the EK cluster, the Microbacterium phage ArMaWen was found in Baltimore (MD) in 2018. The goal of my project was to annotate its genome using bioinformatics tools such as DNA Master, GeneMark and Phamerator, I used the NCBI protein database and HHpred software to determine the composition and function of the annotated genes. The findings of this study will be available at the Symposium.

**Monsalve, Anne:**

Dr. Jennifer Gaudio

ED

"The Effect of Note-taking Strategies on Student Comprehension and Achievement"

With the growth of technology and the push to utilize it in today's classrooms, many educators have begun to notice a difference in the level of comprehension achieved by their students. Aside from this, many students' notetaking strategies prove to be poor, ineffective and focused only on the surface-level of information. The purpose of this study becomes essential when questioning the level of effectiveness note-taking strategies bring to the classroom. Researching a possible answer to this question provided students, teachers, and schools with a better understanding of their instructional design and their students' level of effective note-taking in the classroom. Therefore, this research looked to provide proof that requiring students to handwrite notes on graphic organizers in class allows for a greater understanding of the course material in a 12th grade, all girls World Literature classroom. The data was collected through anonymous pre-surveys, observation journals, archival data of grades, and post-surveys. The results will be presented at the Symposium. The results helped to inform educators' instructional practices and exposed students to strategies that will help them in their future college careers.

**Muller, Patrick Dorn: Reimann, Alsmith Saintilus, Britney St. Hilaire, Ramsbergson Thomas, Evan Trizonis, Rhys Vaughn, and Anthony Zampirri**

Dr. Vinayak Mathur

NSAH

"Genome Comparison of Bacteriophages ArMaWen and Related Phages"

The identification and annotation of bacteriophage genes is essential to understand the role they play in their life history. Additionally, the structure of the genome helps us classify these phages into various clusters based on their similarities. To assess these concepts in this investigation, the genome of the bacteriophage, ArMaWen was compared to those of a similar bacteriophage within the same cluster, called TinyTimothy. I also compared the genomes of these phages to a distantly related phage in a different cluster called Burro, using bioinformatics tools like DNA Master, Phagesdb, and Phamerator. I performed the structural and functional annotation of the ArMaWen genome to assess how the genes involved contribute to overall survival. I also identified the degree of similarity and the genetic relatedness between the three phages. I was interested in studying how the same physiological and cellular processes in each phage, albeit via different mechanisms play a role in the survival and life history of these phages.

**Mushlit, Lawrence:**

Dr. Michelle Yvonne Szpara

ED

"How Do the Performing Arts Build Strong Social and Emotional Skills for Elementary Students?"

The purpose of this paper is to help show educators that the performing arts make an impact on Social Emotional Learning (SEL). It focuses on how the performing arts build strong social emotional skills for elementary students. The participants in this study are part of the R School District, and a part of the G Drama Group (GDG). 28 elementary students, grades 3 to 5, participated in taking a two-part questionnaire. The first part was completed in December of 2018 and the second part was completed March, 2019. The questionnaires were used to show a student's growth in their SEL over several months. The four leads of the play were interviewed twice about their experience with the play, once at the beginning and again at the end. Interviews were compared to add additional understanding of the growth of the students' social emotional skills. The findings will be available at symposium.

**Parajuli, Sujata: I Aviles, Allison Martin, Kaitlyn Martin, Shannon Quinn, and Lauren Swint**

Dr. Vinayak Mathur

NSAH

"Identification of Unique Gene Elements in Phage ArMaWen"

ArMaWen is a Microbacterium phage genome that infects bacteria and was discovered in 2018. In this research project I was interested in studying closely related phages to ArMaWen and the evolutionary pathway leading to the unique arrangement of genes in these phages. The genes were annotated using various bioinformatics tools such as DNA Master, Phamerator, Glimmer and GeneMark. The bacteriophage database, PhagesDB was used to identify the length of the genome, the cluster, and subcluster of ArMaWen and to find closely related phages. Functional annotation of the genome was performed using Blastp and HHpred database. The Phamerator software was used to map the genome and to indicate the segments of gene Phamily to which this phage belonged. Using the Pharmerator tool I was also able to identify the amount of coding v/s noncoding space, transcription directions, and the virion structure of the phage. Comparison of the genome sequences of similar phages revealed certain unique segments of the genome ArMaWen that were not shared with other phages in the same cluster. It would be interesting to study what role these unique genome elements play in the life cycle of the ArMaWen phage.

**Portnoy, Bobbi:**

Dr. Jennifer Gaudioso

ED

"Math Curriculum Alignment: The Need for a Continuous Curriculum and Curriculum Leadership in Math"

When creating a new middle school, there are many points to consider, including curriculum. When a middle school is being created to be between an existing primary and high school, curriculum must be considered in context for future students in hopes of matriculating in a kindergarten through twelfth grade education. According to researchers, higher student achievement is gained when curriculum is developed and its implementation is overseen by a curriculum leader. In creating the curriculum plan that would work for my school and beyond, I combined best practices from the research, and existing curriculum and program information. Aligning core and differentiated math curriculum is essential from a smooth transition between grades, especially when students attend a progressive school centered on personalization. The purpose of this study and proposal was to examine best practices in kindergarten through twelfth grade math curriculum as well as to align the content curriculum at the new middle

school with the existing primary and high school. This will provide a framework for future schools in need of alignment.

**Redmond, Chelsea:**

Dr. Jennifer Gaudioso

ED

"The Effect of Student-Led Discourse on Student Engagement in an Eighth Grade Classroom"

As many studies suggest, student engagement is an essential component of success within the classroom. However, finding ways to regularly engage students and maintain their engagement can be challenging, especially within the middle school years. The purpose of this study becomes essential when questioning how teachers can utilize student-led discussion and discourse to engage their students throughout class and how to maintain this engagement throughout its duration. This research will provide schools, educators, and students with a better understanding of their instructional design and their students' engagement throughout their lessons. This research looked to specifically provide evidence that the implementation of student-led discussion and discourse increased student engagement within an eighth grade classroom. The data for this study was collected through anonymous student surveys, observation journals, archival data of student test scores and assignment scores, student engagement checklists, and learner engagement rubrics. The results of this study will be presented at the symposium. The results were utilized to help inform educators' instructional practices and expose students to engagement strategies that will aid them throughout their educational careers. The results may benefit others interested in increasing student engagement.

**Rostovich, Samantha:**

Dr. Jennifer Gaudioso

ED

"How Does Self-Paced Flipped Learning Impact Mastery in the Middle School Classroom?"

The differences in teaching and learning styles in schools have been a topic of interest in the academic research realm for many years. At the root of all the varying methods is the real goal, to have students master the concepts and content of which they are presented. The purpose of this study is to explore the efficacy of self-paced, student-centered learning in terms of mastery. This study seeks to answer the research question, "How does self-paced flipped learning improve student mastery in the middle school science classroom." The goal is to qualitatively analyze the outcomes of several learning units through the collection of assessment scores, student reflection narratives, and work completion rates to detect if there is an influence on mastery as the students increase their ownership over the material and their learning. Ultimately, the outcome of this study and future studies within this environment will drive the lesson planning and content delivery for the upcoming school year. The results may benefit others interested in self-paced flipped learning to improve student learning.

**Setley, Alexis:**

Dr. Michelle Yvonne Szpara

ED

"Spiritual Growth of Students within Campus Ministry"

This study evaluated students' faith-based event involvement in conjunction with their attendance of a SEARCH Retreat. This research is being done at R University (pseudonym) with the main focus group being college-age students, ages ranging from 18 to 23. For the purpose of this study, I evaluated student involvement within Campus Ministry and conducted surveys on their feeling of their faith in their God, or a higher power being. My goal with this research is to cultivate a greater faith base within the university, and create a better retreat program for the university's Campus Ministry program. I am

involving the Peer Ministers as a core data source for this research, as they have shown a great interest in wanting to be a part of Campus Ministry and to evolve the program to a new level of participation. To increase the faith base of college students can be a challenge as their lives can be very busy; this research strives to understand how to increase the faith base of the students that I work with every day. A key focus of the research will be observing the students' involvement after they have attended the retreat, and observing if they apply to become peer ministers or leaders of other various retreats. The deeper meaning of the study includes looking to see the correlation of student involvement with the SEARCH Retreat and their spiritual meaning.

**Travia, Jeremy:**

Dr. Michelle Yvonne Szpara

ED

"Examining the Impact of Independent Reading Strategies on Low-income, Middle School Students' Growth in Reading"

**Veriga, Eva:**

Dr. Vinayak Mathur

NSAH

"Genome Analysis and Annotation of the Phage ArMaWen"

Bacteriophages are simple organisms consisting of nucleic acid surrounded by a protein capsid, very similar to viruses. Even though we have the genomic data of thousands of phages, there is an enormous amount of phage diversity that has not yet been discovered. It is very important for the medical field to discover and explore new phages, find out about their biological function and information encoded in it. Phages play an important role in research because they can be used as models for examining virus propagations. Recent research has focused on the role of phage therapy as a potential solution to antibiotic resistant bacteria. I am interested in identifying how certain phages transfer their genes and how does horizontal gene transfer effect closely related phage genomes. For my research project I looked at the ArMaWen phage genome which has been isolated from the host bacteria: *Microbacterium foliorum* NRRL B-24224. I performed a structural and functional annotation of the phage genome using various bioinformatics tools and techniques. This phage was sequenced in 2018 using Illumina shotgun sequencing with a coverage of 360X. The genome is 53939bp long with a CG content of 59.9%. My goal was to identify the coding genes sequence features and evaluate their gene functions. I performed the structural annotation. using the software DNA Master, Glimmer and GeneMark. Phamarator and HHPred were used for the functional annotation.



## **Graduate Special Presentations**

**Dr. Kristin Bowman:**

Dr. Michelle Yvonne Szpara

ED

"Exploration of Early Childhood Educators' Struggle for Inclusion of Infants and Toddlers with Developmental Delays"

**Dr. Richard Gebauer:**

Dr. Amy Gratch Hoyle

ED

"The Impact of Learning Communities on the Integrative Learning of Academically At-Risk Students"

**Forte, Stefania:**

Dr. Alia Sheety

ED

"A Case Study of an Intergenerational Literacy Curriculum for Parents and Children in Liberia"

**Strobel, Doug:**

Dr. Rasheeda Ahmad

ED

"The Role of the Principal in Implementing Models of Inclusion for Students Diagnosed with Emotional or Behavioral Disabilities in Urban Settings"