

E-POSTER ABSTRACTS

BIOLOGICAL SCIENCES

HUMAN IMPACT ON SQUIRREL VIGILANCE

Group Leader: Kornatowski, Madlyn
Undergraduate, Biological Sciences

Group Member: Joe Boyer, Undergraduate, Biological Sciences

Mentor: Prof. Rebekka Darner

Authorship: Joe Boyer, Madlyn Kornatowski

The purpose of this research project is to examine the alertness of Eastern fox squirrels (*Sciurus niger*). We investigated four research questions related to this main idea. Our first question we are seeking to address is, is there a relationship between the alertness of Eastern fox squirrels and how many other Eastern fox squirrels are present? Our next question is, is there a relationship in the amount of time an Eastern fox squirrel is vigilant is there a relation between eastern fox squirrel alertness and the presence of dogs? Fourth, is there a relation between Eastern fox squirrel vigilant safety? We believe this study is important because it gives us more insight into understanding how habitat alterations can possibly impact squirrel behavior. The activity of humans can impact the environment of squirrels, so it is important to understand how such impacts can possibly impact squirrel behavior. The most common pet in the world is the dog; therefore, this study is also important to determine how the presence of dogs can impact squirrels' behavior.

CREATIVE TECHNOLOGIES

ANALYSIS AND CRITIQUE OF CHARACTER CREATORS IN ROLE-PLAYING VIDEO GAMES TOWARDS A MORE INCLUSIVE GAMING ENVIRONMENT

Presenter: Parvin, Ellie
Graduate, Creative Technologies

Mentor: Prof. Kristin Carlson

Co-Mentor: Prof. Sercan Sengun

Authorship: Ellie Parvin

Despite the social progress seen across the United States, video games still cater to white¹ cisgender men² ages 18-34³. Since the release of *Ultima I* and *Wizardry*, the first games that popularized role-playing video games (RPVGs)⁴, in 1981⁵, the genders players have to choose from are typically limited to the extremes of the gender spectrum, man and woman. The first RPVG to include a character creator with options outside the gender spectrum extremes was *7th Dragon III Code: VFD*⁶, an RPG for the Nintendo 3DS, released in the United States in 2016⁷. With 1.6% of adults in the US identifying as transgender or nonbinary, and 5.1% of those adults between the ages of 18 and 29, according to a study done by the Pew Research Center in 2022⁸, the number of trans-inclusive RPVGs doesn't reflect the number of trans people playing video games. In a time where more people are coming out as trans/nonbinary, video games need to reflect that by becoming more inclusive, not less. Video game character creators are a safe environment to try out a new look, a new name, new pronouns, perhaps even a new gender. The great thing about character creators is that nothing is permanent, so players have the option to go back and further customize their characters if they so choose. As Caleb Wysor, a writer for *Gayming* magazine, quotes Niamh Williams, a non-binary trans woman, in their article "How character creators help us explore gender identity and expression," 'the lack of real-life social stakes [makes] games a really inviting environment for personal experimentation.' They conclude their article by saying, "It is not only about reflecting the real self-image of players. It's also about new formations of the existing image... [and] about the open exploration, creation, and dismissal of the self. The way we relate to the idea of the character mirrors the way we relate to our own identity..."⁹ The scope of this research will analyze and critique the current status of RPVG character creators and provide suggestions on how the character creators might be improved.

CRIMINAL JUSTICE SCIENCES

TO BLAME OR NOT TO BLAME: BELIEFS ON WHY CRIME OCCURS

Presenter: Ingold, Kimberly
 Graduate, Criminal Justice Sciences

Mentor: Prof. Jessie Krienert

Americans tend to hold both a punitive and progressive view of criminality. However, those who identify as conservative on the political spectrum are more likely to endorse punitive views than those of other political parties. Despite this, Americans are much less likely to support punitive criminal justice policies than in the past several decades, showing that growth and education on the general topic of criminal justice among U.S. citizens is possible. The purpose of this research is to determine why people believe that crime occurs. Specifically, differences in people's gender, race, religion, and political affiliation will be examined to determine if there are notable differences between beliefs among certain groups. It is hypothesized that participants who identify as white, religious, or conservative will be more likely to blame offenders for committing crimes instead of offering sympathetic reasoning for said behavior.

After receiving IRB approval, a total of 221 participants from a mid-sized Midwestern university were collected. Participant responses to the open-ended question asking why people commit crimes were analyzed using a content analysis approach. Eight themes were identified, four placing blame on the offender for committing the crime and four acknowledging that the criminal behavior was not at the fault of the offender. Consistent with the research design, chi-squared tests were run to determine if there were any demographic differences in participants' beliefs on why crime occurs. The analyses found that individuals of different genders, races, and political affiliations had significant differences on why they think crime occurs with females, males, whites, and conservatives being more likely to mention one of the blameful reasons than non-binary individuals, people of color, and liberals. However, there were no religious differences to be found, meaning religious individuals and non-religious individuals were equally likely to report one of the blameful reasons.

Limitations of this research include that participants were primarily white, female, and liberal college students. Future research should use a more diverse sample to gather findings that may be more generalizable to the U.S. population. Findings are relevant to criminologists because learning to what extent people believe offenders are at fault for the crimes committed occurs can lead to greater opportunities to educate others.

FAMILY AND CONSUMER SCIENCES

ARE SMART MIRRORS EFFECTIVE IN CONSUMER RETENTION? A CONCEPTUAL FRAMEWORK OF SMART MIRRORS IN RETAIL STORES

Presenter: Olson, Morgan
Undergraduate, Family and Consumer Sciences

Group Members: Mia Middleton, Undergraduate, Family and Consumer Sciences
Lauren O'Donnell, Undergraduate, Marketing

Mentor: Prof. Christina Soyoung Song

Authorship: Morgan Olson, Mia Middleton, Lauren O'Donnell, Christina Soyoung Song

Introduction: Technology is essential to navigating the world with ease. After the unexpected hit of the COVID-19 pandemic, consumers have leaned into the widely expanding behavior of purchasing goods through online channels, especially in the fashion industry. This study aims to look into the fashion industry's technological innovation: smart mirrors. Smart mirrors are the way of the future concerning in-person shopping and creating an immersive try-on experience for the consumer. Before smart mirror technology, customers were limited to either having to shop in-store or online. The introduction of smart mirrors closes the gap and adds a new way to look at clothes with technology (Ogunjimi et al., 2021). Stores such as Neiman Marcus have tested out this technology. Neiman Marcus put smart mirrors in three of its store locations to see how customers react (D'Innocenzio, 2015). Smart mirror technology is a concept that is newer to the retail space, yet it would be a beneficial tool to have in all retail stores and for at-home usage as well.

Conceptual Framework: The foundation for our study was derived from the creation of our own conceptual model below. Our model was created with four key components we believe the implementation of smart mirrors within retail stores will cause, leading to an overall increase in consumers' intention to revisit stores. Figure 1 proposes, by installing smart mirror technology, retail stores will see a positive increase in an interactive shopping experience, attractive store atmosphere, accurate apparel fitting, and amplified consumer engagement, which will lead to an increase in consumers' intention to revisit stores.

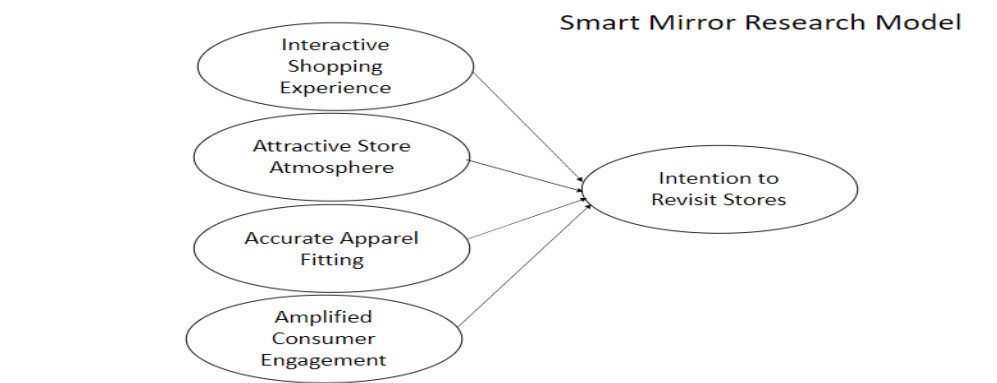


Figure 1. Proposed Framework

Conclusion/Discussion: Our study aims to look at how technology can be used as a tool to enhance in-store customer experience. Overall, our research allowed us to achieve the findings that the smart mirror is useful in numerous ways being beneficial to both consumers and retailers. This revolutionary technology will establish benefits for the consumer, making it a driving force in fashion technology.

References:

D'Innocenzio, A. (2015, May 12). Fitting rooms reboot, using smart mirrors. www.proquest.com

Ogunjimi, A., Rahman, M., Islam, N., & Hasan, R. (2021). Smart mirror fashion technology for the retail chain

transformation. *Technological Forecasting and Social Change*, 173, 121118.

PARENTS' (LACK OF) DISCUSSION ON RACE AND RACISM: A LONGITUDINAL QUALITATIVE INVESTIGATION

Presenter: Michaels, Christina
Graduate, Psychology

Mentor: Prof. Chang Su-Russell, Family and consumer Sciences

Co-Mentor: Prof. Adena Meyers, Psychology

Authorship: Christina Michaels, Chang Su-Russell, Luke Russell, Adena Meyers

Children as young as 3 start developing a sense of color consciousness by identifying people according to racial characteristics (Derman-Sparks, 2012). However, our knowledge of how parents have discussions with their young children about race and racism is still limited, especially among White families. Research on racial socialization is mostly targeted towards minoritized groups. (Hughes & Chen, 1997; Hughes et al., 2006; Winkler, 2012). To address the gap in the literature, we interviewed 24 parents of young children (ages 3-6) about their experiences of discussing race and racism with their children in 2019 (wave 1). Then in the early summer of 2020 (wave 2), we conducted a second interview with 20 parents regarding whether and how they discussed the death of George Floyd and the Black Lives Matter movement with their young children. Each interview was recorded and then transcribed verbatim for analysis. Using the constant comparison approach (Corbin & Strauss, 2015), 40 transcripts were coded via independent coding and peer debriefing to generate codes (Phase 1 coding). Then codes from both waves were compared in a spreadsheet to capture changes, during which researchers also generated theoretical concepts in the memos. The two-phase coding resulted in four themes: (1) Parents were engaged in socialization by talking about race with the focus on treating people similarly and equally. (2) Given the high-profile case and media exposure, parents in wave 2 revealed a stronger need to discuss with their children about race and racism, and a few discussed police brutality. (3) Given the local community context that witnessed both peaceful protesting and unsettling demonstrations that destroyed businesses, parents in wave 2 varied in the extent to which they focused on peaceful protesting vs. fearful feelings about demonstrations. (4) Parents' social locations may shape beliefs about what race is and the importance of discussing race, as well as accumulated tools for applying a color conscious approach to racial socialization efforts. This two-wave study also revealed changes in how and if parents discussed race and racism in a non-high-profile context and in the aftermath of George Floyd. Other factors such as the parents' reflections, awareness of children's conditions (developmental level, exposure to diversity, and color consciousness), and parents' social locations were also discussed as impacting whether and how parents racially socialize their children.

NURSING

EXPLORING WELL-BEING OF PEDIATRIC NURSES WHO CARE FOR CHRONICALLY ILL PEDIATRIC PATIENTS

Presenter: Peterson, Kate
Graduate, Nursing

Mentor: Prof. Sherrill Stockmann

Authorship: Kate Peterson

Problem: Pediatric nurses are uniquely positioned to provide care to chronically ill children. Pediatric nurses may experience increased stress, burnout, and emotional exhaustion, which may negatively affect pediatric nurse well-being (PNWB). Despite the abundance of research directly related to burnout and stress, research is limited concerning PNWB.

Purpose: This literature review was conducted to appraise and synthesize research examining the well-being of pediatric nurses who care for chronically ill patients.

Search Strategy: The electronic search strategy included 21 articles from the databases Cumulative Index of Nursing and Allied Health Literature, Joanna Briggs Institute, PubMed, and PyschInfo. Keywords used in the search included: nurse well-being, pediatric nursing, emotional well-being, and nurse caring. Inclusion criteria were articles dated within the past 15 years, publication available in the English language, and peer-reviewed texts. Articles focused on pediatric nurses caring for chronically ill children were prioritized. Studies were excluded if the group of pediatric nurses were not independently reported.

Results: Themes emerging with this review include workplace stress, burnout, emotional exhaustion, and job satisfaction in relation to PNWB. Stress and burnout negatively affected PNWB. Emotional exhaustion was related to the shorter lifespans of many chronically ill patients. Decreased job satisfaction was related to high workplace stress and burnout. Work experience directly influenced PNWB.

Synthesis of Evidence: Decreased PNWB may lead to decreased role function and quality care for pediatric patients and their families. Research addressing PNWB is needed.

Implications for Practice: This literature review suggests the importance of PNWB due to the negative impact of workplace stress, burnout, emotional exhaustion, and job satisfaction. Study findings emphasized opportunities for nurses to meaningfully engage within this area as clinicians.

PHYSICS

ATTOSECOND STREAKING USING SCULPTED LASER PULSES

Presenter: Yaacoub, Dany
Undergraduate, Physics

Mentor: Prof. Allison Harris

Authorship: Dany Yaacoub, Allison Harris

Electron-molecule collision cross sections play a pivotal role in many areas of applied physics, notably plasma physics, biophysics, and astrophysics. In these fields, electron-molecule cross sections are essential fundamental inputs for modeling complex problems. However, detailed measurements and state-of-the-art theoretical calculations are often too difficult to perform for highly complex molecules or for a wide variety of different molecular targets. As a result, only limited data sets are available. Machine learning algorithms offer the opportunity to estimate these cross sections for molecular targets that are beyond the reach of theoretical models and experimental measurements. We present a feed-forward neural network trained on existing experimental data that provides reasonable estimates of electron-molecule collision cross sections for molecular targets beyond those in its training set. The network's training set included experimental cross sections for diatomic molecules and hydrocarbons with up to 18 atoms. Our results demonstrate that with training on as a few as 15 molecular targets, the algorithm is able to provide predictions within 10% of measured cross sections for most hydrocarbon targets but struggles to predict the correct magnitude of the diatomic molecule cross sections. We also compare the predictions from a second neural network that uses additional input parameters in order to examine whether this improves the network's predictions.

PSYCHOLOGY

STRATEGIES USED BY ADOLESCENTS TO COMBAT MICROAGGRESSIONS ON SOCIAL MEDIA

Group Leader: Hynes, Keeley
Graduate, Psychology

Group Members: Michelle Santana, Graduate Psychology; Hailey Storm, Graduate,
Psychology

Mentor: Prof. Brea Banks

Authorship: Keeley Hynes, Michelle Santana, Hailey Storm, Brea Banks

Little is known about adolescents' experiences with microaggressions (i.e., identity-based insults) on social media. We qualitatively explored adolescents' reactions to microaggressive Instagram posts and the strategies participants use to respond.

SOCIOLOGY/ANTHROPOLOGY

HIGH-RISK FERTILITY BEHAVIORS: IMPACT ON CHILD AND MATERNAL MORTALITIES IN KENYA

Presenter: Chepkosgei-Mercy, Kiprop
Graduate, Sociology/Anthropology

Mentor: Prof. Winfred Avogo

Authorship: Mercy Chepkosgei-Kiprop, Winfred Avogo

Rapid population increase in Sub-Saharan Africa (SSA) over the last several decades, along with limited healthcare interventions has exacerbated child and maternal mortality. The maternal mortality ratio in Sub-Saharan Africa accounts for at least 50 percent of maternal deaths globally. In 2020 alone, 5 million children under 5 years of age died in Kenya. Research also points out that, tragically, many of the mothers and children died of preventable or treatable conditions. Previous research has focused on either biological or socioeconomic determinants of child mortality, rather than the interaction between the two. In this study, we investigate the premise that all social and economic determinants of child and maternal mortality operate through a set of biological mechanisms and proximate determinants to influence mortality. Using data from the 2014 Kenya Demographic and Health Surveys (KDHS) drawn from women aged 15-49, we find that children born to women with primary education or lower were more likely to die before reaching the age of five compared to women with secondary education and higher. Younger women (18 years and below) were also more likely to experience higher rates of child and maternal mortality compared to older women. In addition, women with higher-order birth were more likely to experience higher rates of infant and maternal mortality than those with lower-order births. These results support much of the previous literature on high-risk fertility behaviors and child mortality which showed that younger or older maternal age and short preceding birth interval significantly increase the risk of child and maternal mortality. Furthermore, mothers and children born in health facilities have a lower relative risk of dying than those born at home. Thus, using the Mosley and Chen analytical framework (1984) for determinants of child and maternal survival, I incorporated socio-economic and biological variables to examine the relationship between high-risk fertility behaviors and child and maternal mortality. We discuss the findings in the context of frameworks intended to advance research and influence health policy and medical interventions to improve child survival.

TEACHING AND LEARNING

DUAL LANGUAGE EDUCATION

Presenter: Carrillo, Lilliana
Graduate, Teaching and Learning

Mentor: Prof. Amanda Quesenberry

Authorship: Lillana Carrillo

What really makes a two-way immersion program successful? I am looking for the elements in a two-way immersion program that help dual language students learn a second language. Students who are in the program usually show minimal growth in the target language throughout the years. My goal is to find essential strategies and elements needed in a dual language classroom to help students learn in the target language. I want the results of the study to help two-way immersion teachers and students. I know teachers are always looking for ways to help students learn in the target language to help students. I also want these strategies and elements to help students grow in the target language. I will be conducting teacher interviews where I will ask dual language teachers different questions about the program. I have chosen K-5 dual language teachers at Elmwood Elementary School (District 203). I have selected these educators because they are part of the same two-way immersion program because they are working for District 203. The teachers also have a variety of knowledge and experience that is beneficial to the study. At the end of the research, I will have a better understanding on how to help my dual language students and will allow me to grow as an educator.

ADDRESSING MUSIC PERFORMANCE ANXIETY IN YOUNG MUSICIANS

Presenter: Halt, Amy
Graduate, Educational Administration & Foundations

Mentor: Prof. Amanda Quesenberry, Teaching and Learning

Authorship: Amy Halt

Anxiety in the elementary classroom seems to be on the rise with self-efficacy falling. This has been noted in the music classroom, especially pertaining to musical performance opportunities. The research is designed to answer if music educators can use positive factors to help prevent elevated anxiety and promote positive self-efficacy in multiple performance settings. It will also answer what strategies and interventions can build proactive social emotional learning through music performance. This study researches attitudes and feelings of 4th grade participants concerning anxiety, self-efficacy and the use of interventions. The research proposal is designed with a small sample group of convenience with self-reporting surveys on musical performance anxiety, self-efficacy, and useful tools. This study is significant to the growth of elementary musicians and to teachers desiring students' longevity in music education.

THE EFFECT OF STUDENT GENERATED QUESTIONS ON STUDENT ENGAGEMENT AND LEARNING

Presenter: Hargis, Jen
Graduate, Teaching and Learning

Mentor: Prof. Amanda Quesenberry

Authorship: Jen Hargis

This mixed methods study looks at the effect of questions created solely by a student's perspective about a phenomenon or topic on their engagement during lessons and overall performance on a unit assessment. These questions were then incorporated into proceeding lessons as students' behaviors in class were monitored. A control group was used for comparison in addition to a pre-test to analyze whether knowledge of the subject matter improved with the implementation of the questions into lessons. Results will be analyzed at the conclusion of the study and a conclusion will be made.

CELL PHONE PERCEPTION AMONGST MIDDLE SCHOOL STUDENTS AND TEACHERS

Group Leader: Haws, Ashley
Graduate, Teaching and Learning

Group Member: Rodney Woodward, Graduate, Teaching and Learning

Mentor: Prof. Amanda Quesenberry

Authorship: Ashley Haws, Rodney Woodward

Cell phone usage in school has become more prominent than ever, with 84% of teenagers having their own cell phone (Kamenetz, 2019). Texting was the first big use of cell phones, that could fit in a pocket. But as cell phones have evolved into smart phones, their ability to connect students to people and the internet has increased the desire to use them in school. This study will focus on the opinions of both teachers and students when it comes to cell phone use in the classroom. Our participants will be from two middle schools, in two separate districts. Anonymous data collected will be analyzed and then teacher data and student data will be compared.

THE EFFECT OF CLASS-WIDE SELF-MANAGEMENT INTERVENTION ON LEARNING OUTCOMES IN A 9TH GRADE CLASS WITH STUDENTS AT-RISK FOR FAILURE

Presenter: Homan, Susan
Graduate, Teaching and Learning

Mentor: Prof. Amanda Quesenberry

Authorship: Susan Homan

The purpose of this study is to analyze the effectiveness of self-management intervention with group contingency on learning outcomes by collecting and analyzing assessment data before and after intervention. Review of the current existing literature found that though there were studies that analyzed the effect of student self-management with various reinforcements on on-task behavior, engagement, disruptive behavior, classroom preparedness, and homework completion, there were no studies found that collected assessment data to determine the effect on learning outcomes. This study is a quantitative research study with a baseline and changing criterion design. The study will be conducted in a 9th grade physical science class where 47.6% of the students are on free/reduced lunch and 38% are on individualized education plans (IEPs) and two are on 504 plans. A baseline measurement including two quiz and one test score will be taken for the first phase, student self-management without interdependent group contingency will occur for phase 2, and student self-management with interdependent group contingency will occur in phase 3 where reinforcement is contingent upon student groups reaching weekly goals. Two quizzes and one test will be collected during phase 3. Data analysis will compare baseline measures of student learning outcomes to measures taken during phase 3 of the study using mean class test and quiz scores and a t-test for paired samples will be performed to compare baseline data to the treatment phase data. An acceptability rating will also be administered after the study is completed and reported in cross-tabulated form.

USING GUIDED INQUIRY LABORATORY EXPERIMENTS TO INCREASE STUDENT LEARNING IN HIGH SCHOOL CHEMISTRY

Presenter: Johnson, Lauri
Graduate, Chemistry

Mentor: Prof. Amanda Quesenberry, Teaching and Learning

Authorship: Lauri Johnson

The purpose of this quantitative study is to determine if the use of guided inquiry laboratory experiments (GILE) in high school chemistry can improve student learning, motivation, engagement, and teamwork. Reviewed literature indicates that the U.S. needs more students to enter STEM fields and increased interest and success in high school chemistry can lead high-achieving students in that direction. Literature also shows that the use of labs and inquiry activities are crucial for teaching chemistry effectively, resulting in more successful students. By comparing the performance of students in one chemistry class where a traditional lab is implemented to students in another section of the same course where a GILE is implemented, the effectiveness of using a GILE will be evaluated. This research will help teachers determine if GILEs are superior tools that should be used in high school chemistry. Furthermore, this research can help school administrators and other stakeholders make decisions about the support chemistry teachers need to make those courses more successful, and possibly increase the number of students entering STEM fields after graduation.

IMPACTS OF SOCIAL EMOTIONAL LEARNING (SEL) INTERVENTION ON MENTAL HEALTH AND SCIENCE ATTITUDES

Presenter: Lieberum, Kyle
Graduate, Chemistry

Mentor: Prof. Amanda Quesenberry, Teaching and Learning

Authorship: Kyle Lieberum, Amanda Quesenberry

As the COVID-19 pandemic upended society, many students' mental health was negatively affected. Teachers have been tasked with alleviating this issue using Social Emotional Learning (techniques). The implementation and availability of resources for these techniques varies across the grade bands. One specific area in the literature that is lacking connections is between secondary science education and SEL practices. In this study, the effects of a SEL intervention in a secondary chemistry classroom will be evaluated. The two variables assessed will be students' current mental health and their attitudes towards the subject of science as a whole. Data will be collected using a mixed methods approach via a questionnaire containing both open ended and Likert scale questions.

TECHNOLOGY INTEGRATION IN POST COVID-19 CLASSROOMS

Presenter: McMath, Kelbey
Graduate, Teaching and Learning

Mentor: Prof. Amanda Quesenberry

Authorship: Kelbey McMath

The purpose of this study is to conduct a quantitative study on how teachers' integration of technology in the classroom has changed since the COVID-19 Pandemic. This study is relevant as teachers have been thrust into using technology without guidance in many cases. As technology changes, teachers need to be prepared to adequately prepare students for their future. The literature suggests that teachers are often not provided adequate professional development on technology usage and intrinsic beliefs regarding technology play a role as well. This study will be conducted at a junior high school serving students in 6th-8th grade and will include certified staff from there. The results of the survey given will be analyzed to look for common themes relating to the research questions. By conducting this survey, districts, administration and teachers will have a better understanding of how technology integration has changed since the COVID-19 Pandemic and what kind of support is still needed.

POVERTY AND THE ACHIEVEMENT GAP

Presenter: Miller, Emily
Graduate, Teaching and Learning

Mentor: Prof. Amanda Quesenberry

Authorship: Emily Miller

This research proposal will focus on students living in poverty and the achievement gap. Education is perceived as a weapon against poverty and social inequality (Lee & Bowen, 2006). Unfortunately, there are many inequalities when it comes to education in the United States. Research shows that for decades students who live in poverty fall significantly academically behind their peers that are not living in poverty. Many factors contribute to this gap, but paternal involvement and lack of resources tend to be the main causes for the gap. Teachers can use strategies and certain mindsets to help close the achievement gap for these students living in poverty.

ACADEMIC ACHIEVEMENT AND ATTENDANCE

Presenter: Olsen, Jessica
Graduate, Teaching and Learning

Mentor: Prof. Amanda Quesenberry

Authorship: Jessica Olsen

The purpose of this quantitative study is to evaluate the relationship between attendance and academic performance. This topic is currently being evaluated to improve attendance and academics at Lake Park High School. This study will look at data from the gradebook system in order to evaluate the correlation between the two. This data will look at students that have missed five or more school days and their grade for their course. This study is looking to see if students who miss more school get lower grades (d's and f's). This will help administrators better understand what they can do to improve attendance and academic performance, which the district has set as our school wide goals for the year.

THE IMPACTS OF THE MIDDLE SCHOOL MODEL ON TEACHERS

Presenter: Pasterz, Melissa
Graduate, Teaching and Learning

Mentor: Prof. Amanda Quesenberry

Authorship: Melissa Pasterz

The purpose of this study is to explore the impacts that the Middle School Model (MSM) has on teachers and school culture. This topic is important as the existing literature stresses the importance of middle grades school supporting students through critical changes they experience through young adolescents, however, the research is lacking in how these school structure models impact teachers. The opinions of middle grades teachers are significant as they are also directly impacted by the school structures and the impacts these teachers face will directly impact their students as well. This study will survey teachers at one middle grades school (6-8). This school is currently using a hybrid school structure model that contains elements of the MSM without fully adopting this model, but has used the MSM in the past. Teachers from this school that have used both school structure models will also be asked to partake in a follow-up interview. Common themes in the surveys and interviews will be reported to show the teachers' experiences in the various models. As a result of this research, school districts can make informed decisions on what types of school model can best support teachers, leading to a better education for students.

HOMEWORK DEADLINES & LATE PENALTIES: DO GRADES REFLECT STUDENT LEARNING?

Presenter: Pyle, Scott
Graduate, Teaching and Learning

Mentor: Prof. Amanda Quesenberry

Authorship: Scott Pyle

Homework is an integral part of education as it provides students with the practice and repetition needed to master various skills. But, when students submit their homework after the deadline, grades can often become compromised based on whether a teacher enforces late penalties. This study seeks to understand the impact that deadlines and late penalties can have on students and whether their grades are representative of learning. Two sections of a senior-level high school introductory Speech course were examined. One section received rigorous deadlines and late penalties for all homework assignments while the other had none. After two weeks, the sections switched grading policies and were observed for another two weeks (four in total). Data (homework assignments) were collected for both sections to determine whether there was a significant relationship between deadlines/late penalties and the grades students received. This study hopes to identify the impact that deadlines and late penalties can have on student learning and help teachers determine whether or not to implement them in their classrooms.

MATH AND TEST ANXIETY AND THE IMPACT ON OVERALL MATH PERFORMANCE

Presenter: Rasmuson, Alyssa
Graduate, Teaching and Learning

Mentor: Prof. Amanda Quesenberry

Authorship: Alyssa Rasmuson

The purpose of this study is to gather quantitative data on participants math anxiety, test anxiety, and overall math performance to determine if relationships exist. This topic is important because math and test anxiety are on a rise. As related literature suggests, math anxiety affects our working memory and self-concept, which in turn causes an impact on performance level. Related literature also suggests that math anxiety at a young age can predict future outcomes on performance level. The impact anxiety is having on kids earlier in life is why this research is surveying second through fourth grade students. Student participants will be chosen based on voluntary agreement to participate in the study. Participants will be given two self-questionnaires, one for math anxiety and one for test anxiety, as well as an academic performance assessment that is grade level appropriate. These items will be scored and quantified, and a correlation will be ran to determine the relationship. The correlations will be between math anxiety and math performance, test anxiety and math performance, math anxiety and test anxiety, and the combination of all three. This research will help teachers better understand the impact of anxiety, allow them to help with reducing anxiety, and provide test taking tips. It will help administrators realize they need to tone down the emphasis on test taking. Lastly, it will help parents understand their child's feelings and emotions in both math and test taking, and hopefully encourage them to help at home.

STUDENT CHOICE AND MOTIVATION

Presenter: Ruppert, Kyle
Graduate, Teaching and Learning

Mentor: Prof. Amanda Quesenberry

Authorship: Kyle Ruppert

The objective of the research conducted is to gain a better understanding of how students view being afforded choice in the classroom. The emphasis being placed on what type of choice in learning do students prefer, if any, and if that choice corresponds with greater levels of motivation. Sixth grade students that attend a middle school in rural Central Illinois were given a survey in which they expressed their perceptions of school, what motivates them, and how being provided choice in their learning makes them feel.

EXAMINING STUDENT AND TEACHER PERCEPTIONS OF CANVAS IN ROUND LAKE SENIOR HIGH SCHOOL

Presenter: Sanchez, Brandon
Graduate, Chemistry

Mentor: Prof. Amanda Quesenberry, Teaching and Learning

Authorship: Brandon Sanchez

Students and teachers have spent the better part of two years trying to adjust to remote learning and COVID-19; with most of us returning to the classroom we again have to adjust and adapt to all the information we've gathered to help us grow. The aim of this study is to address the difference between students' and teachers' perceptions of a centralized learning management system, Canvas. Students and teachers will both be surveyed through a school found in Northeastern Illinois; teachers will vary in years served, while students will be juniors and seniors between the ages of 16 and 18. The information gathered between these two groups will be compared to make adjustments and decisions based on both parties.

AN APPLIED PHONICS STUDY FOCUSING ON ELEMENTARY STUDENTS DIAGNOSED WITH SPECIFIC LEARNING DISABILITIES

Presenter: Shields, Carly
Graduate, Teaching and Learning

Mentor: Prof. Amanda Quesenberry

Authorship: Carly Shields

The purpose of this study is to explore how Elementary aged students diagnosed with Specific Learning Disabilities are able to apply phonics to reading. This topic is important due to the lack of representation of students with Specific Learning Disabilities in phonics studies. The literature related to this topic provides support for students who are receiving special education services to receive specialized phonics instruction. The studies that have previously been conducted include disabilities groups that do not represent special education students receiving education in the general classroom setting. Due to this, this study will take place in an elementary school in Central Illinois. Students in First, Second, and Third grade, who have the diagnosis of Specific Learning Disabilities and are receiving special education services, will be eligible to participate. Students will be observed to meet certain criteria, prior to participating in the study. Selected students will be working in small groups and be receiving specialized phonics instruction. This research will allow for special education teachers to be given more support as to what instructional strategies and methods can work when teaching students with Specific Learning Disabilities to read.

EXPLORING THE ISSUE OF TEACHER QUALITY AMONGST STUDENT ACHIEVEMENT WITH DIFFERING TEACHERS

Presenter: Sweet, Kaitlyn
Graduate, Teaching and Learning

Mentor: Prof. Amanda Quesenberry

Authorship: Kaitlyn Sweet

In today's society education is a huge topic. Politicians and educators are constantly debating the best practices that will push the United States further up on the rank of nations in the world. Many of these practices, ideas, and responsibilities fall on the shoulders of our nation's teachers. And while teachers cannot control all that happens in the classroom, their quality does play a major role in the success of the students. This study will explore this correlation between teacher quality and student achievement.

THE EFFECTS OF MATH HOMEWORK ON ACADEMIC ACHIEVEMENT IN AN ELEMENTARY CLASSROOM

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This study will explore the effects of math homework on academic achievement in an elementary classroom. The questions that will be answered within this study are: what are the effects of homework on math achievement and what are the views of the stakeholders regarding math homework? To complete this research, 25 third-graders have been asked to participate in the study. Both quantitative and qualitative data will be collected from pre- and post-tests, as well as student surveys. During this study, participants will begin by completing pre-tests for each topic covered. Participants then will receive math homework correlating to the topics studied in class for some time. Throughout a course of two topics, participants will not engage with math homework. After each topic is taught, students will complete a post-test and survey discussing their thoughts regarding the homework or lack of homework provided.