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ARTS • RESEARCH • SCHOLARSHIP

SYMPOSIUM

APRIL 28, 2020



**Annual Graduate Arts, Research and Scholarship Symposium
April 28, 2020**

**Symposium Co-chairs:
Dr. Sheryl Fuller-Espie, Professor of Biology
Dr. Michelle Szpara, Associate Professor of Education**

April 28, 2020

5:00-8:00 P.M.

Livestream via CabriniLearn Collaborate

(Link on the following page)

- 4:15 – 5:00 pm** Collaborate space opens online for presenters to check technology set-up
- 5:00 – 5:15 pm** Welcome and Introductions
Dr. Chioma Ugochukwu, Provost and Vice President for Academic Affairs

Dr. Beverly R. Bryde, Dean for School of Education

Dr. Michelle Yvonne Szpara, Symposium Co-chair
- 5:15 – 6:30 pm** Graduate Roundtable Presentations
- 6:30 – 6:45 pm** Graduate Presentations - Conclusion and Break
- 6:45 – 7:45 pm** Special Guest Presentations by
Doctoral Candidates Nathaniel Quattlebaum and Charles Speicher

Please Note: Abstracts for graduate presentations can be viewed online at: www.cabrini.edu/symposium

**Link for the Graduate Research & Scholarship
Symposium:**

<https://us.bbcollab.com/guest/ca3b1e8ef9a341b0be587c96b9135fb4>

[Access from a desktop, laptop, smartphone, or tablet;
Google Chrome is preferred, but any internet browser
should work.]

For technology support, call the Cabrini Personal Support
Center toll-free at: 1-844-237-0925.

Presenters may also join via phone (audio only) at:
1-571-392-7650, PIN: 534 361 4753

Graduate Submissions

School of Business, Arts and Media

- Connally, Patrick: Organizational Development;
Faculty Sponsor: Dr. Celia Szelwach and Dr. Anton Shufutinsky
“An Integrated Analysis of the Impact of Ethical Leadership, Trust and Project Methodologies, Tools and Frameworks on Project Management Success Outcomes: A System Theory Approach”
This paper examines the existence and relationship between team-level trust, ethical leadership and project management methods, tools and framework on project management success in multiteam system (MTS) consulting environments. This study proposes a systems theory exploration of professional services delivery organizations where MTS ($n \geq 3$) teams exist. We adopt and apply the influences, characteristics and evaluators (I.C.E.) model proposed by Marques et al. (2013) to study the proposed phenomenon. A quantitative analysis approach is proposed, integrating trust, ethical leadership, and project management success measures to evaluate any relationships.
Keywords: Trust, ethical leadership, multiteam systems, project success, team performance
References : Marques, A., Varajão, J., Sousa, J., & Peres, E. (2013). Project Management Success I-C-E Model – A Work in Progress. *Procedia Technology*, 9, 910–914. <https://doi.org/10.1016/j.protcy.2013.12.10>
- Nyamuomba, Kudzai: Organizational Development;
Faculty Sponsor: Dr. Anton Shufutinsky
“Employee Experiences During Corporate Merger & Acquisition”
The merging of two companies is dictated by the dominance of the financially stronger organization. During the merger of two successful companies, employee existence is often ignored, often resulting in poor employee retention, forced cultural transition, and loss of corporate core values. Although employees are the catalysts that drive the moving parts of organizations, the acquisition process dictates they are incorporated into and distributed throughout the merged organizations, force-reconfiguring them into organizational cultures with new artifacts and espoused beliefs—ones they are not accustomed to or even aligned with. As a result, employees may be left feeling unwelcome, ignored, stressed,

dissatisfied, and in fear of job instability. The purpose of this study is to explore the lived experiences of employees in acquired companies as they undergo the merger and acquisition process. The study examines the benefits of merging employees and how it transforms new thinking, specifically related to the talent, the work activities and the values of companies before and after the acquisition. The research design is a qualitative inquiry using a storytelling paradigm exploring employees' living stories through a petal methodology, which consists of abstracting, futuring, historicizing and grounding to bring employees' stories to life. The results of the study are not yet available.

- Rawlings, Cynthia: Organizational Leadership;
Faculty Sponsor: Dr. Anton Shufutinsky

“An Exploration of Juvenile Trauma-Specific Treatment in The United States”

The purpose of this research study is to advance to the body of knowledge of the process of trauma-specific treatment in U.S. juvenile detention centers via a clinical staff perspective. This study will potentially have significant implications for future research into Trauma-Informed Correctional Care (TICC), particularly with the potential expansion of deeper theoretical understanding of trauma and care among incarcerated youth and prison populations. The growth in recognition of the importance of TICC represents a revolutionary opportunity to improve our nation's juvenile justice system and decrease the number of our youth lives damaged each year through the harsh and ineffective responses to youth offenses. However, to maximize these efforts, it is necessary to first develop a consensus-based understanding of what constitutes a trauma-specific treatment approach within juvenile justice from the perspectives of clinical staff. The primary research question explores the experiences of clinical staff that provide trauma-specific treatment in juvenile justice facilities, specifically focusing on their experiences with regard to the process of effective trauma-specific treatment approaches. The study design includes the use of an interpretive qualitative inquiry approach, specifically using grounded theory (GT) methodology to understand the processes of effective treatment in Trauma-Informed Correctional Care (TICC) among incarcerated youth. Understanding the processes, and the discovery or generation of theory, regarding youth TICC may assist with the improvement of practices, a framework for future research, or both. The results will not be available at the time of the symposium.

- Rossi, Stephanie: Organizational Development;
Faculty Sponsor: Dr. Anton Shufutinsky
“To Be or Not to Be an Executive? What Influences the Career Choice of Women?”

Academic and business studies have been conducted surrounding women’s experiences in the workplace, including examination of the contribution of social identity theory and women’s experiences with the phenomena of gender bias, gender sidelining, and the glass ceiling. Another interesting element worth exploration regarding women’s workplace experience is impostor phenomenon (IP). Collectively, these issues can be contributing factors in women’s choices regarding whether they will pursue executive career opportunities. What ultimately drives those decisions? What choices do women make and why? Do organizations need to be more cognizant of how they develop women as leaders? The purpose of this presentation is to review the literature, in preparation for a questionnaire-based quantitative dissertation research study, to measure the extent of IP and the potential relationship between the phenomenon and women’s decisions regarding pursuing executive level career opportunities in their organizations. The research study has not yet been performed; thus, the study results are not available at this time.

School of Education

- Andersen, Kimberly: Educational Leadership;
Faculty Sponsor: Dr. Michelle Szpara and Dr. Carolyn Berenato
“Restorative Practices: Stakeholder 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 and student achievement, and it carries over into the home. This study looks at restorative practices in a rural secondary campus. The overarching research question being examined through this phenomenological study is: “What are stakeholder perspectives about the implementation of restorative practices?” Interviews were offered to adult stakeholders (teachers, support staff, administrators, and parents) at a rural secondary campus. Through the interviews, the adult stakeholder perspectives on the restorative practices were explored, as well as their impact on

relationships, school climate/culture, and academic achievement. Research from a 2017 meta-analysis completed by Collaborative for Academic, Social, and Emotional Learning (CASEL), a non-profit organization, indicated that schools which 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 interviews will be available at the Symposium.

- Benton, Robert: Educational Leadership;
Faculty Sponsor: Dr. Michelle Szpara

“Teachers' Ability to Foster Student Creativity in the High-Stakes Testing Environment”

This study examines a teacher's ability to foster student creativity in the high-stakes testing environment. Through the use of an open-ended survey, this phenomenological study examines the qualitative data from 3rd-5th grade teachers in a well-resourced suburban school district. The intent of this study is to investigate to what extent standardized testing has impacted curriculum in 3rd-5th grade elementary classrooms. A total of nine teachers from a suburban school district participated in the study. NCLB (No Child Left Behind) has impacted the landscape of curriculum in the education system (Longo, 2010). Through the data collected, this study offers a unique perspective of the perceived impact of high-stakes testing on the ability to plan and implement lessons that cultivate creativity. The coexistence of standards-based practices and lessons that cultivate creativity can exist. These two concepts may complement one another, and could be integrated in curriculum (Baer & Garrett, 2010). While no generalizability can be gained from this study, the study found that high-stakes testing does have an impact on teachers' ability to foster creativity in the classroom.

- Booth, William: Education;
Faculty Sponsor: Dr. Jennifer Gaudio

“The Effect Differentiated Homework Has On Mathematics Achievement”

While the study of homework has been in existence for over a century, it is so diverse and examines so many different elements, it's difficult to recognize any definitive conclusion reached as the results of similar studies have often contradicted each other or the studies are not similar enough to compare. The majority of the 8th-grade math students in this sample do not spend the voluntary, yet expected, time on homework. The

purpose of this study is to examine the effect mathematics homework has on the achievement of 8th-grade math students while utilizing choice (a set of scaffolded problems and students select six) as a means to provide appropriate and thus effective homework assignments. Providing choice in homework assignments allow teachers to differentiate to better meet the needs of the individual students and thus an improved learning experience. This extra opportunity to develop their knowledge results in a greater level of academic achievement. Student completion rate, in-class participation as well as assessment scores will all be recorded and monitored to explore the impact of the intervention. Other teachers like me who want to increase their student learning in an efficient, differentiated method may utilize the strategy as described in this study. The results are not yet available but will be at the Symposium.

- Bowman, Sheila Lynn: Education;
Faculty Sponsor: Dr. Jennifer Gaudioso

“Writing to Enhance Student Achievement in the Math Classroom”

It is becoming common knowledge that the need to improve mathematics performance in America is vital. Students have difficulty with content mastery and achievement in the math classroom. With this lies difficulties in reading, interpreting, and discussing mathematical concepts. All of these student-centered problems are overall hindering their content mastery and achievement in the math classroom. Research suggests that increasing writing and vocabulary development in the classroom is essential because without it, there is a negative impact on learning content. Studies have shown that an increased writing and knowledge of content area vocabulary engages students, empowers their thinking, deepens their understanding, and increases their procedural knowledge of mathematics. The purpose of this study is to determine if increased writing and mathematical vocabulary in the math classroom can positively impact students’ mastery of content and achievement levels. The study will be conducted in a rural public high school setting in southeastern Pennsylvania. Students are in grades 9-12 completing any of the following mathematics courses: Algebra I, Algebra II, Geometry, and Consumer Math. Data will be collected through observations, archival data of grades, and student writing pieces. Through data collection a potential relationship between an increased amount of writing to learn strategies using mathematical vocabulary and both student comprehension and achievement will be explored. Results of this study will benefit classroom

teachers and schools interested in improving student mastery and achievement in math.

- Campbell, Susan L.: Educational Leadership;
Faculty Sponsor: Dr. Michelle Szpara and Dr. Carolyn Berenato
“The perceptions of teachers regarding the impact of teacher/student relationships on academic achievement with trauma-affected students in low socio-economic schools”

This study examines teachers’ perceptions of fostering 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 with trauma-affected students in low socioeconomic schools. Participants were chosen to represent three different grade levels as they pertain to student social, emotional and academic development. This approach offers valid perceptions of student maturity and the ability of students to connect with teachers in varying grades. In addition, consideration was made to include data from two middle schools within the same school district to offer a valid triangulation of data which would support the varying impact of trauma across the school district. 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 at the beginning and end of the study, I will examine the impact of teachers’ self-reflective evaluations of fostering relationships with students. Consideration will be given to trauma-informed care training provided by the school district and how that training dynamically affects the way teachers build relationships with students. The purpose of this phenomenological study is to understand the impact of teacher-student relationships on student academic achievement as it relates to students experiencing trauma in a low socio-economic setting.

- Chisholm, Laura: Educational Leadership;
Faculty Sponsor: Dr. Michelle Szpara
“The Perceptions of Center for Student Success Staff Members Regarding Supports and Barriers for Latinx Students at an Emerging Hispanic Serving Institution”

With the large discrepancy between the graduation rates of Latinx students and students from other racial and ethnic backgrounds, it is both an equity and an economic imperative that higher education institutions focus on the

retention and socialization of Latinx students. This phenomenological study asked a subset of the staff at an Emerging HSI's Center for Student Success about their perceptions of the supports for and barriers to Latinx students' persistence and completion. The study attempts to describe and interpret the patterns and possible meaning behind the campus culture at an Emerging HSI. This study fills a gap in the literature in which the perceptions of supports and barriers to Latinx student success has not been gathered from Center for Student Success staff at an Emerging HSI. In this mini research study, the researcher surveyed 9 staff members to examine the supports and barriers that Center for Student Success Staff at an Emerging HSI perceive as affecting the success of Latinx students in order to add knowledge to the educational research field and benefit Latinx students. Results indicated that supports and barriers are related to employee representation, language barriers, and financial barriers.

- Czyszczon, Lauren: Educational Leadership;
Faculty Sponsor: Dr. Michelle Szpara

“Impacts of Assigned Classroom Settings on the Professional Satisfaction of Special Education Teachers”

Since the establishment of the Individuals with Disabilities Education Act (IDEA) in 1975, implementing special education services has become more vast and complex for special education teachers. Their immense job responsibilities often have them feeling occupational exhaustion and low self-efficacy. The purpose of this qualitative study, employing a phenomenological methodology, surveyed eight suburban, high school special education teachers to better understand their experiences of professional satisfaction based on their assigned classroom settings. Four isolated program (Autistic Support, Life Skills Support, and Emotional Support) teachers and four inclusion classroom teachers completed a GoogleDoc survey that included two self-rating scales and three open-ended questions to identify contributing factors of burnout, stress, and low self-efficacy, and supports either already in place or suggested for implementation to help ameliorate professional satisfaction. Results confirmed a combination of common and differing factors and supports dependent on job assignment. The most notable factors of burnout amongst both groups included the abundance of paperwork and large caseloads; however, isolated teachers note the stressors of handling challenging behaviors while their inclusive colleagues mention struggles with student apathy and their inadequate feelings to fully support special education students. The most prominent support deemed necessary from

both groups was the need for more time; though, it is noted that the two groups of teachers identified varying uses of this time. It may be necessary for administrators to take into consideration the differing job duties when creating schedules and planning professional development in order to retain highly-qualified and effective special education teachers

- Davidson, Jaclyn: Educational Leadership;
Faculty Sponsor: Dr. Michelle Szpara

“The Perceptions of Middle Level Educators on the Prevalence and Academic and Social-Emotional Impact of Bullying on LGBTQ Students”

The purpose of the research is to determine teacher perceptions regarding the academic and social impact of bullying on middle school students. This qualitative, phenomenological study asked teachers and educational support professionals of 7th and 8th grade students in a suburban public school about their perceptions of the impacts of bullying, with a focus on students who identify as LGBTQ. By using anonymous, online surveys, I was able to determine the views of teachers, and also determine potential areas for future study. This pilot study may lead to greater understanding of both student needs, and also the needs of the teachers, as well as if the teachers feel adequately equipped to work with students who identify as LGBTQ. The results indicate that teachers observe a number of microaggressions aimed towards LGBTQ students, as well as bullying having a significant impact on both the emotional and academic health of students. In addition, educators felt that there was inadequate training, and that they are not fully equipped to deal with the issues and needs that arise when a student who identifies as LGBTQ is bullied.

- Diszler, Suzanne E.: Educational Leadership;
Faculty Sponsor: Dr. Michelle Szpara

“Perceptions of Teacher Attendance on Student Academic Performance”

Teachers are constantly looking for areas in which they can improve classroom instruction, as new strategies are being developed, and best practices are being put into place, but teachers must also look at the effect that their attendance has on their students’ academic performance. The purpose of this qualitative study was to look at the perceptions that 21 general and special education teachers in a large suburban school district have on the effects that their attendance has on their students’ performance. The participants in the study answered a 14-question open-ended survey as part of a regularly scheduled staff meeting. The findings of the study showed that both general and special education teachers felt

that student misbehavior, interrupted learning and disrupted routines were the largest areas of concern when teachers were absent. It was also found that many classroom teachers would leave substitute plans that included assignments that reviewed previously learned material or were modified to meet the needs of a substitute who was not familiar with the grade level or teaching style. The data shows that when study participants reported taking discretionary days off they felt as though their attendance did have a negative effect on their students' academic performance. Teachers reported that their students were happy or excited to see them once they returned to school. Many factors can contribute to the academic success of elementary age students, but one must not overlook the importance of the classroom teacher being present each day.

- Elhady Abdelhalim, Ahmed Mohamed - *International Guest Student: STEM Education*; Faculty Sponsor: Dr. Michele Oswald
“*Effectiveness of STEAM approach in developing achievement and mathematical creativity for Egyptian governmental language primary school students*”

Mathematical creativity and achievement are considered as challenges facing both teachers and researchers in the field of education. STEAM – Science, Technology, Engineering, Art, and Mathematics – is a new approach especially in Egypt, which can impact students in many areas. This study aims to identify the effectiveness of the STEAM approach at the primary school level. The main question is: What is the effectiveness of the STEAM approach in developing Mathematical creativity and achievement for primary school students enrolled in the Egyptian official language schools? The study results will help in drawing attention toward improving teaching/learning using the STEAM approach. The study sample consists of grade 5 (70) students of a language school in Egypt. The sample was divided equally into two groups: the first is the experimental group, who were instructed by the STEAM approach; the second was the control group, who were instructed by traditional ways used in Egyptian official schools. The same teachers teach the two groups. The curricular tools were prepared by the researcher: (1) STEAM-approach based unit; (2) Mathematical creativity test; and (3) Achievement test. The results show (1) a statistically significant difference ≤ 0.05 between the achievement posttest means of the two groups (experimental and control group) in favor of the experimental group, and (2) a statistically significant difference ≤ 0.05 between the

creative thinking posttest means of the two groups (experimental and control group) in favor of the experimental group.

- Eubanks, Aisha: Educational Leadership;

Faculty Sponsor: Dr. Michelle Szpara

“Implementation of Trauma Informed Practices in Title 1 Urban Schools: Educators’ Perceptions”

There is an increasing need for service providers who service the most vulnerable communities with high adverse childhood experiences (ACE) to identify prevention strategies that support and reduce the potential risk of high ACE scores. Few studies focus on the perspectives of educators and educator support professionals who are working directly in schools within communities where African-American /Black students have disproportionate rates of community or personal traumatic experiences. This qualitative grounded theory study provided open-ended surveys to educators and educator support professionals to examine current perspectives regarding incorporating trauma-informed practices in a high school deemed an under-resourced, low socio-economic, urban school district or Title 1 urban school. These schools are known to have a high percentage of African American/Black students. Data collection methods included participant selection based on the criteria that they work within a Title 1 urban school in a large metropolitan area. The research gives an overview of the following perspectives from educators and educator support professionals: 1) Necessity and effectiveness of Trauma-Informed practices in their current schools; 2) Potential barriers and challenges with adopting a Trauma-informed approach; and 3) Potential barriers preventing staff members from adopting a Trauma-informed approach. By examining the educator and educator support professionals’ perspectives, recommendations of trauma-informed intervention strategies useful in Title 1 urban schools are identified in order to establish a positive learning environment for African American/ Black students experiencing traumatic and challenging events.

- Forgrove, Brittany: Education;

Faculty Sponsor: Dr. Michelle Szpara

“Positive Behavior Reinforcement: What Ways Can It Improve A Middle School Environment”

This paper explores the different ways a positive behavior reinforcement system impacts a middle school environment. Over the past decade, many school districts across the United States have implemented a school-wide

positive behavior system. This paper will outline research conducted by others detailing the history of positive behavior support in school systems (PBSIS), determining how the system works and outcomes from implementing the system. My research will consist of classroom observation, office referral data, and student and teacher interviews to focus on the ways the system improves the middle school environment as a whole. Research will be conducted at a school in a suburban region in the northeastern United States. Focus will be specific to grades sixth through eighth to determine what ways a PBSIS program impacts a middle school environment. The results of my findings will be available at the Symposium.

- Gauthney, Joy: Education;

Faculty Sponsor: Dr. Jennifer Gaudioso

“Comprehension in Kindergarten: Helping Students Find Meaning”

There are many milestones which kindergartners reach as they settle into their new roles as life-long learners. Of those milestones accomplished by kindergartners, learning to read is an achievement that has a lasting and significant effect on early learners. The lack of a sound early literacy skill basis in kindergarten is so profound that its absence impacts learning in third grade and above. The purpose of this program evaluation is to determine if the practices and strategies implemented in an urban kindergarten reading program aligns with research based practices as well as the Pennsylvania Core Standards. Kindergarten reading programs aim to focus on early literacy skills (alphabet instruction, phonological awareness, and phonics) which support future comprehension of text. Additionally, reading programs established for kindergarten, are designed and executed in alignment with the Pennsylvania Core Standards. To conduct this program evaluation, the initial step was a review of research based practices surrounding early literacy and comprehension skills. The examination of the research facilitated a creation of a benchmark which indicated common best practices. The research based practices were then used as a guideline to analyze and evaluate the reading programs. Through the assessment of the reading programs, the goal was to capture the programs’ embedded objectives to determine if they either meet or lack the components necessary to meet the literacy needs of early readers. This program evaluation would benefit educators who seek to apply researched based practices within their classrooms that will support the necessary foundation for early readers.

- Hale, Jennifer: Educational Leadership;
Faculty Sponsor: Dr. Michelle Szpara and Dr. Amy Gratch Hoyle
“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 interviews, novice and seasoned teachers will share their beliefs and experiences of engaging in Race Talks and how it impacted their work with minority students from low socioeconomic backgrounds. Findings from the interviews will highlight the importance of this type of dialogue to influence a more in-depth understanding that teachers have of the populations they serve. Exploring these perceptions through this type of open discussion can shift the thinking the teachers have, which may lead to a better understanding of the students, parents, and their community. The information gathered from the data sources may also provide evidence for low performing public schools who struggle with finding strategies for addressing teacher attrition and aiding teachers, especially novice teachers, with building stronger relationships with the students and parents in their school.

- Hanobeck, Diana: Educational Leadership;
Faculty Sponsor: Dr. Michelle Szpara
“Incidental Social and Emotional Learning in Middle School to Support Student Mental Health”

The purpose of this qualitative phenomenology is to explore teacher perceptions of their responsibility to support student mental health in schools and investigate their understanding and use of incidental social and emotional learning strategies when no social and emotional learning (SEL) curriculum exists. Though there have been numerous studies on specific curriculum-based SEL programs, there is limited research on how SEL strategies are used when no universal curriculum is in place. Identifying methods, needs, and barriers can help districts create programming based on their specific school needs, since research-based programs have different focus areas. Ten teachers in a suburban middle school completed a Google form containing a mix of fixed-choice and open-ended responses. Random purposeful sampling was used. Following the framework developed by the Collaborative for Academic, Social and

Emotional Learning (CASEL, 2017), teachers identified the areas of social and emotional learning which they support most frequently in the classroom: self-awareness, self-management, social awareness, relationship skills, and/or responsible decision making. Teachers were also asked to identify barriers to supporting social and emotional learning. Results will be available at the symposium.

- Heft, Elizabeth: Educational Leadership;
Faculty Sponsor: Dr. Michelle Szpara and Dr. Maria Schwab
“The Emotional Impact of Disruptive Behaviors on Inclusive Elementary Teachers”

Inclusion is a popular term. The concept is not new, as it has been part of United States educational policies for over fifty years. Current research focuses on teacher attitudes and training in regard to inclusion. There is limited research exploring the emotional impact of inclusion on teachers, and in particular, general education teachers in the United States. The purpose of this critical disability theory study is to understand the emotional impact on general education teachers at the elementary school level who include students with disruptive behaviors. In a pilot study, four teachers, in grades 1 and 2, were individually interviewed. In examining the data collected, I discovered a pattern of teachers questioning their decisions 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 well-being when providing an inclusive learning environment. The addition of a survey to this research will set the foundation for a broader sample and support triangulation of the data for an anticipated case study. The results of the pilot interviews 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. The results of the survey instrument will be available for the Symposium.

- Houston, Kelly: Educational Leadership;
Faculty Sponsor: Dr. Thomas Conway and Dr. Michelle Szpara
“Math Anxiety, Self-efficacy, and Motivation in the Flipped Math Classroom”

The purpose of this qualitative, phenomenological study is to discover how learning in the flipped classroom model impacts math anxiety, self-efficacy, and motivation at the middle school level. The researcher noticed that many of the studies that have been done about flipped classrooms have focused on academic achievement and materials that are available to

implement this type of learning, and there seems to be a gap in the literature when relating this style of learning to these three attributes (math anxiety, self-efficacy, and motivation). Flipped classrooms allow students to begin to create an understanding of the material prior to the class meeting. The direct instruction usually occurs at home, utilizing some type of technology, while the classroom time is designed to strengthen and deepen the understanding of each concept. The participants of this study are 22 eighth grade students that are members of a pre-algebra class. These volunteers will complete a survey designed to identify their levels of math anxiety, self-efficacy, and motivation when learning math utilizing the flipped classroom model. This study will also use focus groups and individual interviews to determine common themes among the students' experiences relating to the designated attributes. These themes could identify the initial triggers of math anxiety as well as possible strategies to alleviate the stress and increase levels of self-efficacy and motivation, so that students can be successful in math on a daily basis

- Jimenez, Tequila Amber Precious: Educational Leadership;

Faculty Sponsor: Dr. Michelle Szpara

“Analyzing the effects of trauma on the African American males who have been incarcerated within the American judicial system”

The apprehension experienced by African American males leads to the research question on the long-term effects of being incarcerated, potential traumatization, and the effects of individual quality of life post-incarceration. Encounters that have happened between the criminal justice system and the African American male population, in general, raise the question as to the population being an unconscious target as evidenced by the illegalization of racial profiling. The reality of being involved within the penal system can possibly lead to different levels of traumatization. The research will focus on the potential development of emotional and/or mental health disorders that stem from traumatization experienced during their incarceration. The sample size will consist of 5 to 7 participants between the ages of 25 to 40 years old who are not incarcerated, but who have experienced incarceration more than once. The methodology will include eight interview questions along with field notes on the observation of the interviewee's responses. The participation is specifically voluntary. The interview questions were developed in order to obtain individual reports by the former detainees of possible traumatization due to incarceration, as well as examining pre- and post- mental health statuses.

In addition, I will examine by comparison the pre- and post- incarceration traumatization effects on the individual. The results of the research findings will be provided at the Symposium.

- Justice, Janine: Education;

Faculty Sponsor: Dr. Michelle Szpara

“Impactful classroom management practices in culturally and linguistically diverse classrooms”

This study explored classroom management practices and strategies used by teachers who are culturally and linguistically different from their students in an under-resourced school. Today, more than ever, students are from diverse, non-White backgrounds. This leads to more English language learners in the classroom or English as a Second Language. I conducted this research during the 2019-2020 school year. The research consisted of interviewing five teachers in different schools who have diverse classrooms. All the teachers work in an urbanized school district in a state in the Northeast section of the country. The interviewees have been teaching for longer than 10 years in a K-8 school. Further research was conducted using empirical journal articles and prior studies on the same subject. It is my goal to learn the most impactful practices to meet those students’ needs and help them succeed, once I am in my own classroom. Results are not yet available but will be available at the Symposium.

- Laffend, Karin: Educational Leadership;

Faculty Sponsor: Dr. Michelle Szpara and Dr. Carolyn Berenato

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

The purpose of this study is to give a voice to students who have successfully transitioned from the familiar environment of the charter school they attended in primary grades, to a high school that mirrors, more closely, the demographics of higher learning environments as well as wider society. Findings from this study may impact strategic planning and, in turn, contribute to more equitable opportunities for minorities from a low socioeconomic background in the United States public school system. This study asks what is a successful transition from middle school to high school for a low socioeconomic minority student from an inner-city charter school; specifically, what is the perspective the students have regarding what should happen between eighth grade and high school years? Both Critical Theory and Critical Race Theory (CRT) focus on

empowering individuals to transcend imposed restraints, including race, gender, or social class constructs (Creswell, 2013). This ethnographic study will counter the stereotype regarding the subjects' ability to succeed academically in a white-middle-class society. Through surveys and interviews, data will be collected to create the counter-narratives, which will be available at the symposium.

- Lawrence, Morgan: Education;

Faculty Sponsor: Dr. Michelle Szpara

“The impact of teacher consistency on a school-wide behavior program within the elementary school setting”

My research will address the following question: how does teacher consistency impact the implementation of a school wide behavior system within an elementary school? Many schools today institute a school wide behavior system to improve the climate and behavior of students in the school. While these systems have good intentions and look great on paper, teacher consistency and follow-through need to happen in order for these programs to work with fidelity. This study focuses teachers' (K-5) consistency within a newly implemented behavior system at a suburban elementary school in the northeast section of the United States of America, and their views and attitudes regarding consistency in implementing the behavior program. Data was collected through voluntary surveys as well as interviews over the course of 8 weeks. It is my goal to determine the impact that teacher consistency has on running the school wide behavior program with fidelity.

- Mallaghan-Rasco, Suzanne: Educational Leadership;

Faculty Sponsor: Dr. Michelle Szpara

“Experiences of first-generation female-identifying undergraduates leading to success at the university level”

This study (through interviews) will examine the needs of first-generation female-identifying undergraduates across diverse racial, socio-economic, and immigration statuses in a four-year institution of higher education (IHE). Much of the current research focuses on individual ethnic groups versus all female first-generation IHE students in general. My purpose is to understand the needs of female and female-identifying students rather than looking at each ethnic group individually. I hope that results of this study will lead to recommendations for enabling students to utilize their strengths while minimizing their challenges. As diversity increases in the United States, professors and advisors need to be attuned to these

students' needs and struggles in order to best support them in their IHE endeavors. First-generation women attending IHEs today are different than those of years past, more diverse in nationality, culture, language and socio-economic conditions. Familial responsibilities and expectations, cultural sensitivities, and feelings of belonging or disconnect may also influence students' abilities to persist through degree completion. With increased awareness of student needs, institutions of higher education may better support students towards completion of their degrees. The information derived from this research may be used to enhance recommendations for professional development for professors and advisors, as well as programming and support for students. The key research question is as follows: what do first-generation female undergraduates identify as needs in order to complete their higher education goals, and what supports and interventions do they identify as most helpful in assisting them in meeting their goals? Results will be available at the symposium.

- Marsden IV, Thomas Jay: Education;
Faculty Sponsor: Dr. Jennifer Gaudio

“Improving Civil Online Reasoning at the Secondary Level”

The methods of active citizenship through analogue means are eroding and the future of an informed electorate must use the proper skills and strategies to navigate digital resources. Through examinations into the intervention needed to measure student competency at the secondary level, this study investigates curricula that can inform students about the digital domain by evaluating and improving informed decision making from genuine sources. The research of the Stanford History Education Group found widespread confusion between news and advertisements as factual evidence by secondary students. Using fact checking skills and digital literacy tools, students can improve critical thinking about political topics. A baseline assessment on media literacy will be used to evaluate digital literacy prior to a series of research challenges, which will be evaluated using national standards. Merging new models of engaged and participatory politics develops a framework from media literacy for students and future constituents. The key results, conclusions and recommendations will be presented during the Symposium.

- McShay, Ryan P.: Educational Leadership;
Faculty Sponsor: Dr. Michelle Szpara

“Through the perceptions of 7th-8th grade mathematics teachers, what are some of the self-identified reasons they persist and retain in Title I schools?”

In an era of education defined by standards and accountability, teacher retention continues to be a leading factor contributing towards student achievement levels. Particularly in under-resourced, Title I-funded schools, the challenges of maintaining adequate staffing of highly qualified educators, especially in mathematics and sciences, remains a pressing challenge and obstacle towards learning outcomes. While much research exists on the reasons for teacher attrition and movement out of the education field, limited accounts explore the converse of this issue – what causes teachers to continue working in high-turnover schools. This qualitative case study explores the reasons for teacher retention and persistence in one of these schools and highlights recurring themes within the self-reported perceptions of beneficial supports and incentives which decrease turnover. Data collection utilizes online GoogleForm surveys distributed to 7th-8th grade mathematics teachers who have three or more years of experience in a Title I school. The results from this survey will be available for the Symposium.

- Mignogno, Stephanie: Education;
Faculty Sponsor: Dr. Jennifer Gaudioso

“Increasing Student Engagement with Novels in English Language Arts: A Curriculum Evaluation”

As students move from elementary school to middle school and high school their engagement can decline. In English Language Arts classrooms this disengagement is apparent during reading instruction. This curriculum evaluation will serve to measure the engagement level of an 8th English Language Arts curriculum at a local junior high school. Specifically, this evaluation will focus on the particular novels used throughout the year. Using a reading engagement survey that was given to the 8th grade English Language Arts teachers working at the school, along with research on the curriculum considerations and best practices that should be employed in an English Language Arts classroom, the following was found: 1. Curriculum texts must be relevant and relatable to students while fostering autonomy and self-efficacy. 2. Texts should reflect students’ culture and interests. 3. At some point during the year students should be given the opportunity to choose what they will read. In order to determine if the curriculum under review meets these needs, more

research on best practices and text choice considerations will be completed. This will be used to create a rubric that reflects the highest bar possible for an engaging English Language Arts novel curriculum. The Curriculum under review will be compared to this rubric, and recommendations will be made.

- Moore, Kristen: Education;

Faculty Sponsor: Dr. Michelle Szpara

“Regular education teachers’ views on creating successful inclusive classroom”

My research centers around the following question: what are the views of regular education teachers regarding the preparation, training, and support they receive to create successful inclusive classrooms? More frequently students with special needs have been integrated into regular education classrooms, which has impacted the way general education teachers structure their classroom to meet the needs of all students. This study focuses on the views and attitudes of general education teachers in Dragon Hills Middle School (pseudonym) on how well prepared and trained they are to create and maintain a successful inclusive classroom. I primarily focused on teacher data through the application of surveys and face to face interviews for 8 to 12 weeks. It is my goal to help organize and establish more professional development for the teachers who do not feel they have an adequately inclusive classroom. The results will be available at the Symposium.

- Norton, Joseph: Education;

Faculty Sponsor: Dr. Michelle Szpara

“How can technology impact academic achievement in 5th grade mathematics?”

The purpose of this paper is to help educators take a look at the impact of technology on academic achievement in a fifth-grade mathematics classroom. In today’s educational system, many school districts are beginning to incorporate many uses of technology into the classroom and curriculum. Teachers are being asked to use this technology in many ways that they are not trained to do, in order to raise standardized test scores and increase rigor in the classroom. When used properly, technology can be a valuable tool for teachers and students alike. How can we use this technology to increase scores? Does technology impact academic achievement in a positive way? The district where I currently teach is a district that has pushed the one-to-one student to technology initiative to grades fourth through tenth grade and has plans to have each student in the district K-12 be equipped with their own device in the near future.

Participants in this study were asked to follow normal educational practices within a mathematics classroom for two units in a fifth-grade math curriculum. Participants from two separate classes were asked to complete a unit with the use of their school-issued device and a unit without their Chromebook. Normal curriculum assessment scores were collected and kept confidential for this study. Participants were asked to complete a survey at the end of the second unit of the study that asked their preferences in the use of technology and how they think it helped them succeed. Results are not yet available but will be available at the Symposium.

- Pardini, Patricia: Educational Leadership;

Faculty Sponsor: Dr. Michelle Szpara

“The Impact of a Scripted Reading Program on a Title I Middle School through the Perspectives of Teachers”

With the rise of high-stakes testing, scripted reading programs have gained popularity in schools all over the country. These programs are alluring to districts because of their promise of quick results on standardized testing and their “cover everything” model that forces every classroom to follow the same script, therefore providing the same education for each student. The districts can pay for specific programs or school-wide reform programs that claim to help the entire school progress towards better outcomes on state-mandated tests. These programs are more likely to be found in high poverty, urban schools that are struggling with meeting the state requirements on scores, attendance, etc. These schools are also more likely to have teachers with less teaching experience, which can explain the appeal for principals who want to ensure that content is being covered in the same way across their buildings. This qualitative study will focus on the impact of a scripted reading program on a Title I middle school through the perspectives of teachers. The ontological perspective shows that they perceive the impacts differently because the reality of the program looked different in each of the classrooms and in how they chose to implement the program. The results of the research could help districts understand what impact scripted programs may have on their schools and if this type of program will benefit their district. The results of the study will be available at the symposium.

- Parris, Jaime: Educational Leadership;
Faculty Sponsor: Dr. Michelle Szpara

“Exploring the Perceptions/Experiences of African American Young Males in Under-Resourced Public School Districts”

The purpose of this study is to examine how African American young males, in 12th grade and 18 years or older, perceive their public school education experiences in an under-resourced school district. The study will address the feelings African American males have towards their under-resourced school district and possible misconceptions African American males have in regards to the concept of education and the educational system. The goal of the study is to examine any themes that arise among the students who have experiences with public school education in an under-resourced school district. The study will bring to light ideas and goals of new teaching techniques targeted to reach African American males.

- Petras, Jennifer: Education;
Faculty Sponsor: Dr. Jennifer Gaudioso

“A Study of Inclusive Best Practices in Math Education in the Least Restrictive Environment for Students with Learning Disabilities”

Oftentimes, students have difficulty learning in the least restrictive environment. The purpose of this study is to increase learning of special education in an inclusive co-taught math classroom in terms of number sense. Guided by the 2004 Individuals with Disabilities Education Act (IDEA), this study examined four learning disabled students in an inclusive regular education co-taught math class and the best inclusive practices surrounding small group math instruction using the CPA (concrete-pictorial-abstract) delivery of service model in daily instructional learning. The question one needs to ask is how to best teach students inclusively in the least restrictive environment. Over the course of the intervention, student instruction in the core math curriculum was driven by performance data, such as observational checklists, progress monitoring in small group instruction, exit tickets, and end of unit assessments. Data was analyzed qualitatively. In conclusion, the study found an increase in study proficiency for the four students with learning disabilities following the study of the unit five curriculum on number sense concepts. Moving forward, this study would benefit the research which suggests the positive benefits of co-taught instruction in conjunction with a regular education and special education teacher. To provide students with a free, appropriate, public education (FAPE),

students can learn alongside grade-level peers in the inclusive setting to increase the least restrictive environments percentages in the general education setting.

- Reels, Serita M.: Educational Leadership;
Faculty Sponsor: Dr. Michelle Szpara

“Unseen and unheard: Experiences of racial microaggressions and homelessness among Black male college students”

Higher education has always been a path towards upwards mobility for Black Americans. However, Black students, particularly males, struggle to achieve academically while battling racial microaggressions at predominately-White institutions (PWI’s). To complicate matters further, Black male students are more likely than their non-Hispanic White male counterparts to experience homelessness and/or housing insecurity during college. Consequently, housing instability can significantly affect academic performance and reduces the odds of Black men completing a college degree. An exploration on the intersectionality between race and homelessness among Black male college students has received little attention in the literature. The objective of this study was to examine how experiences of racial microaggressions and homelessness for Black male students intersect to affect the college experience. Utilizing qualitative research methodology, a focus group discussion was conducted with six Black male students at a private four-year PWI. The focus group data was tape-recorded, transcribed, coded, and analyzed for themes and patterns using grounded theory. Findings show that most students experienced racial microaggressions from both teachers and peers, and students described their college experience as “neutral” because of feeling stereotyped, unwelcomed, and not engaged in student life. Of those who experienced homelessness or housing insecurity during college, invisibility and competing demands were common feelings expressed. Findings from this study are intended to foster deeper understanding and meaningful inquiry to guide future research on the intersection between racial microaggressions and homelessness and its impact on academic success for Black male students at PWIs.

- Roulston, Robert: Education - CIA;
Faculty Sponsor: Dr. Jennifer Gaudio

“Best Practices for Demonstrating Number Sense through Place Value”

Student ability to explain place value is an area students find challenging. This was a recurring challenge for students as observed through

assessments, discussion, and general problem solving. The purpose of the study was to identify and evaluate the program and practices currently available to students. They have had difficulty demonstrating and communicating number sense through place value of integers and decimals. This program evaluation explored how use of instructional strategies could improve upon a pre-existing curriculum for areas of need in regards to place value acquisition. The research explored instructional practices currently used in the core program and explored the integration of number-sense building strategies, such as Number Talks, as a core program strategy to improve a student's understanding of place value. By the end of the study, the instructional program will be evaluated for strengths and weaknesses in approaches related to a providing a progression of instruction designed to build student number sense of place value. Recommendations will be made for students to obtain a deeper understanding of place value and therefore have a deeper sense of understanding of numbers and their values. This research was intended to foster a mathematical environment of deeper learning and understanding for future students.

- Scanlon, Jordan Elizabeth: Educational Leadership;
Faculty Sponsor: Dr. Michelle Szpara

“Impacts of Project-Based Learning in the ELA Curriculum on Student Engagement and Performance at the Third-Grade Level in a Low-Income School”

Project-based learning (PBL) has gained popularity as an alternative to traditional instruction and learning. Research has shown PBL’s positive impact on student engagement and learning, especially at the middle- and high-school levels. Based on the ideas of John Dewey, Jean Piaget, and Lev Vygotsky, PBL promotes student autonomy in the classroom, supporting a more student-centered approach to instruction and learning. However, much of research surrounding PBL focuses on the higher-level grades and content areas like Science, Mathematics, and Social Studies. Two areas that show a gap in the literature are: (1) PBL in the English Language Arts (ELA) Curriculum and its impact on student engagement and performance; (2) PBL at the elementary level in low-income schools. The purpose of the qualitative research study was to determine teacher perceptions regarding the impact PBL in the ELA Curriculum has on student engagement and performance at the third-grade level in a low-income school. Teachers selected from an urban public elementary school in Pennsylvania completed an online, open-ended survey. The data

showed that participants had a general understanding about PBL, and agreed that it impacted student engagement and performance. Participants admitted that although they believed in the importance of PBL, they felt they were unable to adequately use it in their classrooms without certain supports.

- Shookster, Angela: Education;

Faculty Sponsor: Dr. Michelle Szpara

“Determination of Socioeconomic Status and its Impact on the Over-Identification of Students in Special Education”

My essential purpose for this research is to investigate the following question: How might socioeconomic status impact the over-identification of students with a disability or special needs? I’m working to find if students who reside in a low socioeconomic area are eligible for special education services based on a true disability or because they are not provided with the necessary resources, instruction, and supports needed to progress through the general education curriculum. My data will be collected primarily through a teacher survey/questionnaire and a parental interview. I am focusing on teachers who are employed by and parents that send their children to Garland Elementary (pseudonym). I will be distributing an electronic survey to the teachers. There will be 5 questions, and it focuses on the specific resources and tools that are available in our area. I will also be conducting interviews with parents. The questions pertain to availability of services, relationships with staff and administration, and parent/guardian abilities. Finally, I will be looking at public data to see how Garland Elementary ranks against other schools in the area or in the state. It is my goal to bring awareness to this problem. The results will be available at the Symposium.

- Taddeo, Julie: Educational Leadership;

Faculty Sponsor: Dr. Michelle Szpara

“Supports needed to help first-generation students graduate in the Allied Health Science Programs”

In this phenomenological study, the researcher will survey students in the nursing and occupational therapy assisting (OTA) programs to better understand, from the student perspective, what supports are needed in order to successfully complete and graduate in an allied health science program. First-generation, low socio-economic students have a lower graduation rate than their peers who have at least one parent who graduated from a bachelor’s degree program. Students participating in the

survey are currently attending a small, private, two-year institution, have taken their general education courses, and are now enrolled in classes specific to their major. The results of the study show that first-generation students often do not have financial support at home. The financial supports affect the amount of time the student has to study because they have to work more hours to help support their family.

- Toombs, Christien: Education;

Faculty Sponsor: Dr. Michelle Szpara

“Restorative Practices Within the Classroom”

This study explored the implementation of restorative practices within the classroom environment and examined how establishing relationships decreases behavior referrals that remove a student from the school community. I conducted this research during the 2019-2020 school year with my 7th grade secondary homeroom class at Beacon Hills Middle School (pseudonym). There were 30 students and 5 teachers who participated in this study. For the purposes of this study I primarily focused on the use of restorative circles in secondary homeroom once a week for 8-12 weeks to establish and maintain relationships with my students. It was my goal to build positive relationships in the hopes that behavior referrals would decrease from the previous school year prior to the initiative of Restorative Practices at Beacon Hills Middle School. The results are not yet available, but will be available at the Symposium.

- Trexler, Megan: Educational Leadership;

Faculty Sponsor: Dr. Michelle Szpara

“Exploring the Impact of Structured Word Inquiry on Developmental College Students’ Perceptions of Self-Efficacy in Reading”

Developmental education plays a major role across the nation’s community colleges and public, four-year universities (Center for the Analysis of Postsecondary Readiness, 2020). Although developmental education has many benefits, research shows that developmental students have a lower self-concept than that of their college-level peers (Martin, Goldwasser, & Harris, 2017). This is problematic because self-concept, as well as its precursor of self-efficacy, influence general academic performance and persistence (Bong & Skaalvik, 2003). Within the context of reading instruction, self-efficacy influences motivation, processes, and achievement (Cantrell, Correll, Clouse, Creech, Bridges, & Owens, 2013). Despite the importance of self-efficacy on reading performance, prevalent literacy instruction frames the English language as illogical and irregular.

These representations reinforce learning methods such as memorization of spelling and vocabulary, that do not maximize self-efficacy. Therefore, this study explores the impact that Structured Word Inquiry (SWI)—a linguistic approach to literacy—has on developmental college students’ perceptions of self-efficacy in reading. To explore this impact, a grounded study was conducted among approximately 52-60 students across four sections of developmental college reading. During 12 weeks of SWI instruction, data was collected through word sorts, surveys, interviews, and blogs. Drawing on this data, I argue that by framing English orthography as a logical, well-ordered system and engaging students in shared inquiry into language, SWI enhances students’ beliefs in their ability to develop literacy. These findings suggest that SWI can aid in the formation of self-efficacy; consequently, community college faculty and administrators should consider integrating SWI into developmental reading programs.

- Voroscak, Chrystal: Education;

Faculty Sponsor: Dr. Michelle Szpara

“Examining the Needs of Students with Emotional Support”

This research study took place in order to evaluate the needs of students with emotional support. Students who were in a self-contained emotional support classroom were compared to students who were mainstreamed, but all students were in the Anchor program at my school. At the beginning of the study, students were asked to assess how much they believe they are receiving access to support methods. Students were then observed during the core reading and math classes to see if supports were being offered, if needed. The results of this study will be made available at the symposium.

- Whitmore, Sarah: Education;

Faculty Sponsor: Dr. Jennifer Gaudio

“Metacognitive Learning and the Productive Struggle of Complex Math Problems”

Motivating students to productively struggle through perceived difficult math tasks is a challenge that middle school math teachers face, especially when working with students who have historically struggled in math. The goal of this study was to see if teaching students about metacognition as well as challenging them to metacognitively reflect before and after completing an assignment would help them be more comfortable with persevering through perceived difficult math problems. To conduct this

study, students first completed a survey to determine their metacognitive awareness and a survey to identify their comfort level and attitude towards math. Next, they completed a series of assignments that required them to answer reflective questions prior to and upon completion of complex math tasks. While students completed these tasks, they were observed for task initiation and task completion. The goal of this study is to qualitatively analyze students' responses to reflection questions, student task initiation and task completion, and student benchmark scores to determine if teaching students about metacognition impacts students' willingness to productively struggle through complex tasks. The results of this study may benefit others who are looking to improve students' willingness to productively struggle through complex math problems. Results will be available at the symposium.

- Williams, Kimberly: Educational Leadership;
Faculty Sponsor: Dr. Michelle Szpara and Dr. Amy Gratch Hoyle
“Factors that support or hinder the transition to college for high school students from high poverty schools”

This proposed qualitative study seeks to address the question of how best to serve and support the needs of secondary-level students from high-poverty areas, as they seek to transition to post-secondary education. For the purposes of the current pilot study, students in the US educational system, over age 18, will be contacted to explore their experiences with the transition process. The specific research question is as follows: What are the factors that support or hinder the transition to college for high school students from high poverty schools? Preliminary results will be available at the symposium.

School of Natural Science and Allied Health

- Muller, Patrick: MSBS - Biology;
Faculty Sponsor: Dr. Sherry Fuller-Espie
“Analysis of Methylated TET2 and EZH2 Genes and the Use of Purified Leaf Extracts of Malva pseudolavatera as Therapeutic Approaches for Acute Myeloid Leukemia”

Cancer of white blood cells, known as leukemia, can take on different forms, depending on the nature of the transformed cells, and how these affect homeostasis. Acute myeloid leukemia (AML) is an example of

such. AML renders early developed myeloids unable to properly differentiate into a corresponding immune cell within the monocyte lineage. This in turn causes the numbers of immature, precursor myeloblast myeloids, to increase in the bone marrow. Those progenitor cells divide rapidly, and are able to incur mutations, over a short period of time - a hallmark of cancer and transformed cells. Most cases of AML involve mutations in epigenetic mechanisms and modifications, usually in DNA methylation or histone acetylation. This can render genes encoding for DNA methylation, chromatin modification, transcription factors, and tumor suppressor proteins, to become silenced, contributing to the transformed cells' uncontrolled, rapid cell proliferation and division. Within the past year, developing technologies and advances in medicine have led to the development of therapeutics and cures for AML. This includes, but not limited to, the study of the altered gene expression of the methylation of the epigenetic regulator genes, *TET2* and *EZH2*, via Sanger sequencing. The isolation and purification of the extract of the leaves of the plant, *Malva pseudolavatera*, has also been used as a therapeutic to alleviate symptoms of AML. These give rise to the ultimate development of gold standard treatments for AML, that can effectively and safely treat any patients, taking into account their genetic backgrounds, overall physical health, and age.

- Veriga, Entleva: MSBS - Biology;
Faculty Sponsor: Dr. Sherry Fuller-Espie

“Current Research Findings and Treatment Challenges of Pancreatic Cancer”

Pancreatic cancer is the third most common cancer of the gastrointestinal tract. This cancer has low patient survival rates due its asymptomatic progression and late stage discovery. By the time this cancer is diagnosed it has spread to the other organs, making it harder to treat. The only curative treatment approach is surgery with the goal that the cancer is still confined to the organ itself. Other therapies used today include chemotherapy treatments and in some cases radiation with minimal curative effectiveness. PARP inhibitors, immunotherapy agents, radiation therapy are tested in clinical trials. The purpose of this research is to discover new research developments in pancreatic cancer therapies and to explore the factors that play a role in its carcinogenesis driven by genetic and epigenetic factors. Cancer microenvironment studies have been of high interest in predicting the progression or shrinkage of pancreatic cancer. Current research involves ways to find new markers for detecting pancreatic cancer in the early stages through blood testing or different

molecular testing techniques using cancer samples and comparing them to normal tissues. The research has shown that the inactivation of *P53*, *P16*, *DPC4* tumor suppressor genes are common in pancreatic carcinoma. Up to date there is no effective therapies and more research is necessary to help in pancreatic cancer improved outcomes. The main discovery that can change pancreatic cancer outcome is early detection using cancer biomarkers specific to pancreas.

Special Thanks

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