

THE WRIGHT STATE — LAKE CAMPUS 2017 — 2018 SCHOLARLY REVIEW



ANNUAL RESEARCH REPORT (2017)

RESEARCH SYMPOSIUM PROGRAM (2018)

Lake Campus Research Report - 2017

Research Initiative Program Overview

The Lake Campus is home to numerous technical, associates, bachelors, and graduate programs. These programs are run across a student population of approximately 1,200 students and facilitated by approximately 40 full time faculty. The scholarly achievements contained in this report represent faculty's commitment to pedagogy and their areas of study as they contribute to their classrooms, disciplines, and community.

The Lake Campus Research Initiative provides a unique internal funding source for faculty and students. This program is designed to help drive the scholarly production of the campus by providing monies for research infrastructure, supplies, travel, and publishing costs as well as sponsoring events that contribute to the campus research mission.

The Lake Campus Research Coordinator is pleased to present the third annual Lake Campus report of research activities. This report provides a listing of the scholarly and creative endeavors from Lake Campus faculty during the 2017 calendar year and spans a variety of disciplines and formats. This report has been compiled from faculty submissions of scholarly achievements. Congratulations to Lake Campus faculty for their success and much encouragement as they continue in the future.

Strategic Highlights from 2017

- The second annual Lake Campus Research Symposium was held in Dicke Hall. The event grew to be centered around 30+ research projects presented by 50+ faculty and students and was attended by over 200 people from the campus community.
- The internal grants and scholarly expenses program that was launched in 2015 continued to provide research support to both faculty and students.
- Several research and teaching related workshops related to building proposals, writing research papers, and identifying grant support were held.
- For the second year in a row, faculty and faculty mentored students produced 100+ units of research spanning peer reviewed journal articles, contracts and grants, books, book chapters, book reviews, novelettes, reference works, short fiction works, plays, and scholarly presentations.

Research Articles

- Asempapa RS, Sturgil DJ, Adabor JK. 2017. Mathematical Modeling: A Teaching and Learning Strategy in School Mathematics. *Pennsylvania Teacher Educator* 16: 66-75.
- Attariani H, Momeni K, Adkins K. 2017. Defect Engineering: A Path Toward Exceeding Perfection. *ACS OMEGA* 2: 663-669.
- Bell A, Jacquemin SJ. 2017. Evidence of Morphological and Functional Variation Among Bluegill *Lepomis macrochirus* Populations Across Grand Lake St. Mary's Watershed Area. *Journal of Freshwater Ecology* 32: 1-18.
- Bertsoz MJ, Ciampaglio CN, Jacquemin SJ. 2017. Spatial Variation in Tooth Shape of Miocene Populations of *Carcharocles megalodon* Across Ocean Basins. *Southeastern Geology* 52: 179-194.
- Ciampaglio CN, Jacquemin SJ, Fabian AJ. 2017. Morphological Analysis of the Blastoid Taxa *Metablastus wortheni* and *Tricoelocrinus woodmani* with Emphasis on Taxonomic Implications. *Southeastern Geology* 52: 206-222.
- Daniel D. *In Press*. Invisible Beings in the Natural World: Paracelsus on Ghosts, Angels, and Elemental Spirits in the *Astronomia Magna*. In: *Life in Heaven and Earth: Renaissance Perceptions of Life Phenomena* (H Hirai, Editor).
- Faragher M. 2017. Snoop-Women with Notebooks: Naomi Mitchison, Mass Observation, and the Gender of Domestic Intelligence. *The Space Between: Literature & Culture 1914-1945*.
- Follo G. *In Press*. Autoethnography: Examining Gender and Body in Martial Arts. *SAGE Research Methods Cases*.
- Follo G. *In Press*. On the Road to Redemption and Recovery: How Feminist Self-Defense Supports Empowerment and Life Skills Goals. *Journal of Behavioral and Social Sciences* 4.
- Hess W, Cubberley M. 2017. An Inexpensive Programmable Dual-syringe Pump for the Chemistry Laboratory. *Journal of Chemical Education* 94: 72-74.
- Jacquemin SJ, Johnson LT, Dirksen TA, McGlinch G. *In Press*. Changes in Water Quality of Grand Lake St. Marys Watershed Following Implementation of a Manure Application Ban. *Journal of Environmental Quality* 47: 113-120.
- Junker CR, Jacquemin SJ. 2017. How Does Literature Affect Empathy in Students? *College Teaching* 65: 79-87.

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- Kich M. 2017. Richard Powers and the Postmodern Novel of Ideas: Part 1: The First Four Novels. *Texture*.
- Kich M. *In Press*. Richard Powers and the Postmodern Novel of Ideas: Part 2: The First Four Novels. *Texture*.
- Simons CW, Hall C, Vantasever S. *In Press*. Production of Resistant Starch (RS3) from Edible Bean Starches. *Journal of Food Processing and Preservation*.
- Simons CW, Hall C. 2017. Consumer Acceptability of Gluten-Free Cookies Containing Raw Cooked and Germinated Pinto Bean Flours. *Food Science and Nutrition* 6: 77-84.
- Vandegrift G. 2017. A Solar Eclipse Activity for a Sunny Day. *Sky & Telescope*.
- Yang Z, Johnson M. 2017. Hybrid Particle Image Velocimetry with the Combination of Cross-Correlation and Optical Flow Method. *The Visualization Society of Japan* 20: 625-638.

Technical Reports

- Jacquemin SJ, Dirksen TA, Poore P, Mazzone N, Ricketts T, Gnau N. 2017. Improving Grand Lake St Marys Water Quality Using Reconstructed Wetlands. *Quick Facts Sheet Prepared by Ag Solutions (Mercer County, OH)*.
- Jacquemin SJ, Johnson LT, Dirksen TA, Mescher TM, McGlinch GM. 2017. Changes in Water Quality in Grand Lake St Marys Watershed Following Manure Application Regulations. *Quick Facts Sheet Prepared by Ag Solutions (Mercer County, OH)*.

Books and Edited Collections

- Kich M, Barlow A. *In Press*. *Pop Goes the Decade!: The Sixties*. ABC-CLIO/Praeger Press.
- Wilson DH. 2017. *Modern Masters of Science Fiction: J.G. Ballard*. Literacy Biography & Criticism. University of Illinois Press.
- Wilson DH. 2017. *Battles Without Honor or Humanity*. Omnibus Fiction Collection. Raw Dog Screaming Press.

Book Chapters, Short Fiction, and Articles in Collections

- Faragher M. *In Press*. Celestoids and the City: Tabloidization of the Working Class in *White Teeth* and *Lionel Asbo: State of England*. In: *Twenty-First Century Fiction and the City* (M Michael, Editor). Palgrave Press.
- Faragher M. 2017. Big Data and Universal Design in *The Home Market*. In: *Histories of Digital Labor* (S Ross and A Pilsch, Editors). Publishing House TBD.
- Kich M. *In Press*. Michigan. In: *State by State History of Race and Racism in the United States* (Reid-Merritt, Editor). Greenwood Press.
- Kich M. *In Press*. The Murder of Vincent Chin. In: *25 Events that Shaped Asian American History* (L Dong, Editor). ABC-CLIO Press.
- Kich M. *In Press*. On A Forgotten Front: Miracle at St. Anna and the Fiction of the Italian Front During World War II. In: *James McBride. Critical Insight Series* (MR Mickle, Editor). Gray House/EBSCO Press.
- Kich M. *In Press*. Reading James McBride: A Literature Review of the Secondary Sources on His Works. In: *James McBride. Critical Insight Series* (MR Mickle, Editor). Gray House/EBSCO Press.
- Kich M. *In Press*. Unlikely Witnesses to Convulsive and Consternating History: The Narrators of James McBride's *The Good Lord Bird* and Thomas Berger's *Little Big Man*. In: *James McBride. Critical Insight Series* (MR Mickle, Editor). Gray House/EBSCO Press.
- Wilson DH. *In Press*. Velvet Sunshine. *Die Novelle* (Issue 8).
- Wilson DH. 2017. Dogpoet. *Le Scat Noir* (Issue 230).
- Wilson DH. 2017. Post-Delirium. *Alienist Magazine* (Issue 1).
- Wilson DH. 2017. The Role of Ages. *Fiction International* (Issue 50: Fool).
- Wilson DH. 2017. The Foothills of Memory. *Le Scat Noir* (Issue 222).
- Wilson DH. 2017. Dinámica del aula ("Classroom Dynamics"). *Bienvenidos al bizzaro* (Translation into Spanish by Hugo Camacho). Orciny Press.

Book Reviews and Literary Critiques

- Wilson DH. *In Press*. Review of “*The Asylum of Dr. Caligari*” by James Morrow. *Foundation: The International Journal of Science Fiction*.
- Wilson DH. *In Press*. Review of “*Deleuze and Baudrillard: From Cyberpunk to Biopunk*” by Sean McQueen. *Journal of Science Fiction Film & Television*.
- Wilson DH. *In Press*. Biopunk SF in Liquid Modernity. Review of “*Biopunk Dystopias: Genetic Engineering, Society and Science Fiction*” by Lars Schmeink. *Extrapolation*.
- Wilson DH. 2017. From Frankenstein to Futurity. Review of “*Gothic Science Fiction: 1818 to the Present*” by Sian MacArthur. *Extrapolation*.

Conference Presentations and Proceedings

- Attariani H, Rezaei SE, Momeni K. 2017. Material by Design: A New Road Map to Strengthen Low-dimensional Nanostructures via Defect Engineering. *Annual Technical Conference of Society of Engineering Sciences*, Northeastern University, Boston, Massachusetts.
- Attariani H, Momeni K. 2017. Property Enhancement in Low-dimensional Materials via Defect Engineering, New Path to Materials’ Architecture. *MACH Conference*, Hopkins Extreme Materials Institute, Annapolis, Maryland.
- Atuahene F, Atuahene MK, Adabor JK. 2017. Predicting Student Achievement Using a Multinomial Logistic Regression Analysis of Educational Reform in Ghana. *Mid-Western Educational Research Association (MWERA) Conference*. Evanston, Illinois.
- Atuahene F, Atuahene MK, Adabor JK. 2017. Cochran Mantel-Haenszel Chi-square Analysis of Student Achievement Based on Geographical Location of High School in Ghana. *Mid-Western Educational Research Association (MWERA) Conference*. Evanston, Illinois.
- Barrett L, Simons CW. 2017. How Does the Quality of Plenish® High-Oleic Soybean Oil Compare to Four Other Commodity Oils? *Lake Campus Annual Research Symposium*, Celina, Ohio.
- Bell A, Jacquemin SJ. 2017. Evidence of Morphological and Functional Variation Among Bluegill *Lepomis macrochirus* Populations Across Grand Lake St. Mary’s

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Watershed Area. *American Fisheries Society – Ohio and Indiana Chapters*, Muncie, Indiana.

- Benitez F, Richter T, Ciampaglio CN. 2017. At the Intersection of Graphic Design and Science: Implementation of Specialized Exposure Techniques. *Lake Campus Annual Research Symposium*, Celina, Ohio.
- Bertson MJ, Ciampaglio CN, Jacquemin SJ. 2017. Evidence of Tooth Shape Variation in *Carcharocles megalodon* Across Ocean Basins. *Northeastern – North-Central Joint Section Meeting, Geological Society of America*, Pittsburgh, Pennsylvania. Published Abstract Vol. 49.
- Beyke S, Boyd B, Knapke C, Moore A, Jacquemin SJ. 2017. Swimming Performance Chamber Design: A ‘How to Guide’ on the Design, Build, and Implementation of a Novel Chamber for Ecological Research. *The Ohio Academy of Sciences*, Cincinnati, Ohio. Published Abstract *The Ohio Journal of Science* Vol. 117.
- Cavanaugh J. 2017. US Trade and Manufacturing – What You Think You Know But Do Not IGNITE. *AURCO*, Bowling Green State University - Firelands, Huron, Ohio.
- Cavanaugh J, Huelskamp D. 2017. Building Student Learning Responsibility. *AURCO*, Bowling Green State University - Firelands, Huron, Ohio.
- Cavanaugh J. 2017. Building Student Learning Responsibility. *Lake Campus Annual Research Symposium*, Celina, Ohio.
- Ciampaglio CN, Fuelling L, Mason CR. 2017. Optimization of the Aqueous Formic-Acid Solution Formulation and Dissolution Procedures Used in the Removal of Fossil Vertebrate Material for Carbonate Rocks. *Lake Campus Annual Research Symposium*, Celina, Ohio.
- Clayton A. 2017. Analysis of Patterns and Processes of Chondrichthyes Across the Permian-Triassic Boundary. *Lake Campus Annual Research Symposium*, Celina, Ohio.
- Daniel D. 2017. Paracelsus Confront the Mauerkirche: Christ’s “New Creation” in Inter-Confessional Paracelsianism. *Global Reformations. Transforming Early Modern Religions, Societies, and Cultures*. Centre for Reformation and Renaissance Studies, Toronto, Ontario, Canada.
- Daniel D. 2017. Translating Paracelsus’s *Astronomia Magna* (1537/38) from Early Modern German to English. *Lake Campus Annual Research Symposium*, Celina, Ohio.

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- Faragher M. 2017. Wells' *The Shape of Things to Come: Social Psychology and Polling in the Future Tense*. *Space Between Society Conference*, University of Mississippi. Oxford, Mississippi.
- Faragher M. 2017. "Cooper's Snoopers": Women and the Cultural History of Political Polling. *Lake Campus Annual Research Symposium*, Celina, Ohio.
- Follo G. 2017. Physical Feminism, Self-defense and the Women of Tijuana, MX. *North American Society for the Sociology of Sport Conference*, Windsor, Ontario, Canada.
- Follo G. 2017. Evaluating 'Flipped Classroom' Tools: Wikipedia, Edmodo, Netflix and More. *American Sociological Association Meeting*, Montreal, Quebec, Canada.
- Follo G, Huelskamp D. 2017. Evaluating 'Flipped Classroom' Tools: Wikipedia, Edmodo, Netflix and More. *Lake Campus Annual Research Symposium*, Celina, Ohio.
- Follo G. 2017. The Creation of Narrative and Counter Narrative of Police Videos: Social Constructionism and Impression Management. *The Society of Social Problems Annual Meeting*, Montreal, Quebec, Canada.
- Follo G. 2017. Recovery House: Feminist Self-Defense and Recovery. *Annual Association of Behavioral and Social Sciences Conference*, Las Vegas, Nevada.
- Follo G. 2017. An Autoethnography on Physical Feminism and Living the Female Body: Embracing the Suck of Commando Krav Maga Nine-Day Bootcamp. *Annual Ethnographic and Qualitative Research Conference*, Las Vegas, Nevada.
- Hochstein DD. 2017. Test Anxiety and Study Habits in College Students. *Annual Meeting of Midwestern Psychological Association*, Chicago, Illinois.
- Hochstein DD. 2017. Test Anxiety and Study Habits in College Students. *Lake Campus Annual Research Symposium*, Celina, Ohio.
- Hochstein DD. 2017. Effects of Class Type and Participant Characteristics on College Students' Studying Time. *The Ohio Academy of Sciences*, Cincinnati, Ohio. Published Abstract *The Ohio Journal of Science* Vol. 117.
- Hochstein DD. 2017. Effects of Class Type and Participant Characteristics on College Students' Studying Time. *Lake Campus Annual Research Symposium*, Celina, Ohio.
- Huelsman S, Schemmel C, Smtih A, Jacquemin SJ. 2017. Understanding Swimming Performance Variation on Ohio Minnows (Cyprinidae). *American Fisheries Society – Ohio and Indiana Chapters*, Muncie, Indiana.

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- Huelsman S, Schemmel C, Smith A, Jacquemin SJ. 2017. Understanding Swimming Performance Variation in Ohio Minnows (Cyprinidae). *The Ohio Academy of Sciences*, Cincinnati, Ohio. Published Abstract *The Ohio Journal of Science* Vol. 117.
- Huelskamp D, Cavanaugh J. 2017. What Makes a Student Responsible? How and Faculty Encourage it? *Lake Campus Annual Research Symposium*, Celina, Ohio.
- Jacquemin SJ. 2017. Changes in Water Quality of Grand Lake St. Marys Following the Distressed Watershed Designation. *Ohio Soil and Water Conservation Commission*, Columbus, Ohio.
- Jacquemin SJ. 2017. Changes in Water Quality of Grand Lake St. Marys Following a Manure Application Ban. *Ohio Department of Agriculture*, Columbus, Ohio.
- Jacquemin SJ. 2017. Cyprinidae Morphology: Implications for Ecology, Evolution, and Survival in the Face of Changing Ecosystems. *Biology Department Seminar Series*, Central Michigan University, Mt Pleasant, Michigan.
- Jacquemin SJ. 2017. Water Quality of Grand Lake St. Marys Following a Manure Application Ban and Potential Implications for Lake Erie Management. *Stone Laboratory Summer Lecture Series*, The Ohio State University, Put-In-Bay, Ohio.
- Jones C, Albayyari, J. 2017. Developing Bachelor of Technical and Applied Studies with a Concentration in Manufacturing Science. *IACB, ICE, & 2017 ICTE Proceedings*, Las Vegas, Nevada.
- Junker C. 2017. Save Grand Lake: What it Means When the Heart of a Community Turns Toxic. *ASLE (Association for the Study of Literature and the Environment): Rust/Resistance*, Detroit, Michigan.
- Mason CR, Huelsman SC, Clayton AA, Ciampaglio CN. 2017. An Investigation into the Lithology and Biostratigraphy of a Bonebed in South-Central Kentucky. *Lake Campus Annual Research Symposium*, Celina, Ohio.
- Mason CR, Huelsman SC, Ciampaglio CN, Clayton AA. 2017. Description of a Late Mississippian (Chesterian) Vertebrate Bearing Limestone Unit Within the Leitchfield Formation. *Northeastern – North-Central Joint Section Meeting, Geological Society of America*, Pittsburgh, Pennsylvania. Published Abstract Vol. 49.
- Mitchell MG, Ciampaglio CN, Jacquemin SJ. 2017. Convergent Evolution in Tooth Morphology of Filter Feeding Lamniform Sharks. *Northeastern – North-Central Joint Section Meeting, Geological Society of America*, Pittsburgh, Pennsylvania. Published Abstract Vol. 49.

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- Mitchell MG, Ciampaglio CN, Jacquemin SJ. 2017. Convergent Evolution in Tooth Morphology of Filter Feeding Lamniform Sharks. Dayton, Ohio. *Wright State University Celebration of Research, Scholarship, and Creative Activities*, Dayton, Ohio.
- Nichols C, Doll J, Jacquemin SJ. 2017. Comparing Swimming Performance of Bluntnose Minnows *Pimephales notatus* in Lentic and Lotic Systems. *Midwest Fish and Wildlife Conference*, Lincoln, Nebraska.
- Nichols C, Doll J, Jacquemin SJ. 2017. Swimming Performance of Bluntnose Minnows *Pimephales notatus* in Lentic and Lotic Waters. *American Fisheries Society – Ohio and Indiana Chapters*, Muncie, Indiana.
- Shell R, Ciampaglio CN. 2017. The Earliest Permian Shark Fossils from Texas and Their Implication for Later Marine Faunas. *American Geophysical Society*, New Orleans, Louisiana. Published Paper Number pp23A-1295.
- Shell R, Ciampaglio CN. 2017. Vertebrate Biostratigraphy from an Early Permian (Leonardian) Marine Limestone in North-Central Texas. *Northeastern – North-Central Joint Section Meeting, Geological Society of America*, Pittsburgh, Pennsylvania. Published Abstract Vol. 49.
- Simons CW, Hall C. 2017. Production of Resistant Starch (RS3) from Edible Bean Starches. *AACC International*. San Diego, California.
- Simons CW, Hall C. 2017. Production of Resistant Starch (RS3) from Edible Bean Starches. *Lake Campus Annual Research Symposium*, Celina, Ohio.
- Stevenson M, Hennon M, Simons CW. 2017. Effect of Centrifugal Mill Speed on Particle Size and Characteristics of Pinto Bean Flour. *Lake Campus Annual Research Symposium*, Celina, Ohio.
- Wilson DH. 2017. Reading from *Battles Without Honor or Humanity: Volume 2*. *Rhizomatic Presents: AWP Off-Site Event at The Big Hunt Brewery*, Washington, D.C.

Faculty Contracts and Grants

- Attariani H. 2017. Material By Design: A New Road Map to Strengthen Low-dimensional Nanostructures via Defect Engineering. Amount: \$10,000. Funding Source: Computational Grant.

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- Ciampaglio CN. 2017. Consolidation of Unconsolidated and Soft Sediments for Use in Thin Section Analysis. Amount: \$2,035. Funding Source: Lake Campus Research Initiative.
- Clayton A. 2017. Formic Acid Breakdown and Dissolution of Soft Sedimentary Rock Diagnostic Investigation. Amount: \$2,000. Funding Source: Lake Campus Research Initiative.
- Clayton A. 2017. Stream Table Model for Surface and Subsurface Water Flow Studies with Respect to Biology, Earth and Environmental Sciences, and Education Science Departments. Amount: \$2,000. Funding Source: Lake Campus Research Initiative.
- Crites B. 2017. Improving STEM Education with Legos. Amount: \$16,250. Funding Source: Inspire.org Jr. Lego League Grant
- Crites B. 2017. Purchase of SeaPerch Submarines. Amount: \$1,500. Funding Source: SeaPerch.org.
- Crites B. 2017. Science Day for Mercer/Auglaize Counties. Amount: \$1,225. Funding Sources: CEHS, WOEf Board, and Kroger.
- Crites B. 2017. Purchase of STEM Bins. Amount: \$215. Funding Source: WOEf Board Grant.
- Crites B. 2017. STEM Day. Amount: \$1,200. Funding Source: WOEf Board and College of ECE.
- Crites B. 2017. STEM at the Lake. Amount: \$1,000. Funding Source: Mercer County Civic Foundation.
- Crites B. 2017. STEM Club Supplies for Local Schools. Amount: \$750. Funding Source: Midwest Electric Community Connections Grant.
- Crites B. 2017. STEM Night in Lucy's Lab. Amount: \$1,000. Funding Source: Space Grant Consortium.
- Crites B. 2017. Purchase of Books for Lucy's Lab, Science Day Awards, and Christmas Around the World Supplies. Amount: \$700. Funding Source: WOEf Board Grant.
- Crites B. 2017. Purchase of Lego League Supplies. Amount: \$2,000. Funding Source: Lake Campus Research Initiative.
- Daniel D. 2017. Lake Campus Student 2018 Study Abroad Tour of Central Europe. Amount: \$1,500. Funding Source: WOEf Board Grant.

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- Faragher M. 2017. Research Funds for Book Project: *Forms of Persuasion*. Amount: \$2,000. Funding Source: Lake Campus Research Initiative.
- Follo G. 2017. Research Funds. Amount: \$1,982. Funding Source: Lake Campus Research Initiative.
- Hance D, Johnson M. 2017. Engineering Related Competition Projects. Amount: \$2,000. Funding Source: Lake Campus Research Initiative.
- Jacquemin SJ, Dirksen TA. 2017. Nutrient and Sediment Retention Potential of Treatment Trains in the Grand Lake St. Marys Watershed. Amount: \$25,980. Funding Source: St. Marys Community Foundation.
- Jacquemin SJ, McGlinch G, Dirksen TA. 2017. Great Lakes Restoration Initiative (GLRI): Maumee River Sediment and Nutrient Reduction Project. Nutrient and Sediment Retention Potential by Controlled Pond and Riparian Tile Buffer Systems. Amount: \$79,584. Funding Source: Ohio EPA.
- Jacquemin SJ. 2017. Research and Publication Expenses Grant. Amount: \$750. Funding Source: Lake Campus Research Initiative.
- Johnson M. 2017. Purchase of Pneumatic Equipment to Aid in Student Learning. Amount: \$1,500. Funding Source: WOEf Board Grant.
- Simons CW. 2017. Functional Properties and Application of Resistant Starches (RS3) Made from Pulse Starches. Amount: \$1,000. Lake Campus Research Initiative.
- Vandergrift G. 2017. Software Development for Printing Wikiquizzes. Amount: \$1,700. Funding Source: WOEf Board Grant.

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Lake Campus Research Symposium - 2018

Event Program



April 19, 2018

Dicke Hall

11:00 am – 1:30 pm

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Research Symposium Overview

The Lake Campus Research Committee is pleased to present the third annual Lake Campus Research Symposium. The Lake Campus Research Symposium provides an opportunity for the campus to showcase the scholarly achievements of faculty and students and represents one of the pillars of the Research Initiative Program. The presentations in the symposium demonstrate faculty and student commitment to pedagogy and their respective disciplines as they advance their classrooms, study areas, and community. Congratulations to Lake Campus faculty and students for their success and much encouragement as they continue in the future.

2018 Symposium Presentation Abstracts

- Abromavich H, Huelskamp A. 2018. How Does Exercise Affect Cystic Fibrosis?
Our project will focus on exploring the evidence of how an active lifestyle helps children with cystic fibrosis. We will explain what the disease is and the physiology of the disease. We will explain the experiments used to test the children and the assessment tools used to record the results. We will then conclude the project with giving our opinion on the effects of exercise on children with cystic fibrosis based off of our research.
- Brotherton C. 2018. Does Stereotype Threat Affect the Memory of Older Adults?
The aim of this proposed study is to examine the effect stereotype threat has on older adult's memory performance. Stereotype threat on memory is important to examine because this knowledge can help us to understand the decline of memory with age. The participants in this study are 50 years old or older and will be randomly assigned to either the control group or stereotype group. The participants in the stereotype group will be told that the purpose of the study is to see if the experimenter can replicate the findings of a previous study that suggests age has a negative impact on older adult's memory. The participants will complete a memorizing phase, a distractor phase, and a recall phase to test their memory performance. The participants in the stereotype group are predicted to recall more incorrect words than the control group.
- Brown A, Schmitt A, Brown C, Goulet T. 2018. Asian American Culture and Healthcare in the United States
Asian Americans make up 5.6% of the entire U.S population; this began when more than 20% of Asians came to the United States as refugees. In this presentation we will be taking a closer look at the many cultural traditions expressed by this group. All around the world people express emotions and view certain situations in different ways; as healthcare professionals it is our job to recognize these differences and accommodate our patients in a beneficial way. We will be looking at health care, common diseases associated with the group, marriage, life expectancy, religion and the traditions belonging to Asian Americans. This presentation will help to give us a better understanding of the background from a healthcare perspective of this culture.

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- Ciampaglio CN, Clayton AA, Fuelling LJ, Poore P. 2018. Consolidation of Unconsolidated and Soft Sediments for use in Thin Section and Core Analysis

Soft rock samples, unconsolidated sediments and soft rock - unconsolidated cores must be consolidated before undergoing slicing and polishing. Care must be taken during the consolidation process so that soft rock specimens do not disintegrate, while unconsolidated specimens must utilize techniques that do not disrupt the internal structure of the sediment. Most soft sediment and unconsolidated sediment consolidation procedures use multi-part chemical systems and successive dehydration and infiltration techniques. These are usually time intensive, expensive, and use hazardous chemicals. Furthermore, most of these techniques were developed for biological specimens with much smaller volumes than petrographic specimens. A more practical approach involves consolidating soft rock samples and unconsolidated core sediments using common, less expensive, and relatively safer epoxies and adhesives. These materials can be diluted with solvents such as acetone, ethanol, or xylene to decrease working viscosities. The diluted solution can be dripped slowly on the surface of a heated soft sediment block, or unconsolidated sediment core, then allowed to cure. Soft sediment/interlayered shale cores from a Mississippian-age site in central Kentucky and a Permian age site in Kansas were consolidated with cyanoacrylates, epoxy putties, and diluted (20% xylene) two-part resins in order to infiltrate and solidify the sediment. Once cured, the cores were embedded in plaster and sectioned lengthwise into slabs. The slabs were then polished revealing the internal bedding structure. Portions of the sections were cross-sectioned and thin sectioned. The resulting polished slabs and thin-sections exquisitely exposed the internal bedding structure and lithology of the in-situ cores and sedimentology.

- Clayton AA. 2018. Faunal Description and Analysis of a Fossiliferous Lag Layer Identified along the Clapp Creek Tributary in Williamsburg County, South Carolina

The city of Kingstree is located in Williamsburg County within the east-central portion of the South Carolina coastal plain. Within city limits, along and adjacent to Clapp Creek, a tributary of the Black River, an extremely fossiliferous layer exposes a variety of shark, fish, and reptilian teeth, scales, and bones (Weems & Bybell 1998). The age of the faunal elements within the unit span the Late Cretaceous (Maastrichtian) through the Early Quaternary (Pleistocene). Due to the high concentration of vertebrate and phosphatic material present, this highly fossiliferous layer is referred to as a "bonebed". A bonebed is a lag layer within which the vertebrate material represents more than 5% of the supporting matrix. The fossiliferous sediment is exposed by excavating approximately two meters below the surface of the bank of the creek.

- Clayton AA, Ciampaglio CN, Fuelling LJ, Cobb CT. 2018. Acidic Breakdown of Calcium Carbonate Rich Sedimentary Rocks

Lithified sedimentary rocks, comprised of calcium carbonate, often contain valuable information in the form of vertebrate and invertebrate faunal material. This information holds the clues to past sedimentary environments and structures. Paleontologist work to disinter the organismal remains from the consolidated material without destroying or marring the structure of the fossil remains. Past literature provides little information regarding an effective procedure to extricate the fossiliferous material without marring its structure. Previous work has been conducted using a 10% solution of acidic acid. This method did little to no damage to the fossil assemblages, however, it was ineffective at total breakdown of the lithified rock fabric. A more effectual acid for this process is an aqueous solution of formic. I previous investigations researchers used 10% formic solution and buffered the with calcium carbonate. The [formic acid] is a stronger and quicker procedure however is does have its own disadvantages; the buffering raises the solution's pH and thus devalues the formic acid's efficacy. This procedure also produces a precipitant [calcium formate] that encrusts the rock material and consequently renders the formic acid ineffective. This systematic research is investigating the optimal formic acid percentage to ensure dissolution of calcium carbonate rocks by modifying the temperature, stir rate, percent solution, and not buffering the acidic solution. The ultimate objective is to find the superlative balance of these variables to ensure

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total dissolution without damaging the fossil material. In this presentation, the current data shows that the methods being utilized are producing positive results. The ultimate outcome of this research will be to give researchers the ideal combinations of heat, concentration and stir rate to guarantee the most effective dissolution of calcium carbonate sedimentary rocks.

- Condon C, Didier L, Kitchen W, Posada E, Simons M, Wilson B, Hochstein D. 2018. The Effect of Text Box Size and Survey Method on Response Rate

This current study will examine the effect of text box size and survey method on response quality. Fifty undergraduate students from Wright State Lake Campus will be recruited to participate. A 2x2 factorial design was used, with participants being randomly assigned to four different conditions. The conditions will be a combination of text box size (small versus large) and survey method (paper versus online). Response quality will be measured as the number of words per question answered. It is hypothesized that participants will give answers higher in response quality in the online condition and in the larger text box condition. This is important to study due to the fact that many studies within the social sciences, course evaluations, and academic exams are conducted using surveys and open-ended questions.

- Crites N, Tuthill B. 2018. Heart Failure, the Leading Cause of Death

In this project, research will be gathered on heart failure patients who are over the age of 65 years old. Heart failure occurs when the heart cannot adequately pump the blood to the rest of the body. The results of this study will determine the effectiveness of treatments in different stages of heart failure based on mortality rates. The stages for heart failure are lettered A through D. Stage A occurs when the person has risk factors for heart failure but no symptoms. Stage B progresses onto changes to the heart but still no symptoms. Symptoms arise with stage C along with physiological changes to the heart. Finally, stage D is the last stage of heart failure. Treatments need to be specialized in order to relieve symptoms. Palliative care is the typical course of treatment for stage D. The research question being answered in this projects is; In patients 65 and older, how does early detection of congestive heart failure (Stage A and B) compared to late detection (stage C and D) affect treatment options and mortality rates?

- Daniel DT. 2018. Paracelsus and His Religious Legacy: Radical Theology and Spiritualism in Interconfessional Paracelsianism

Theophrastus Bombast von Hohenheim, or Paracelsus (1493/4–1541), is often called the “Luther of the Physicians” because of his revolutionary medical ideas. However, Paracelsus also espoused radical religious views that played an important role in the Paracelsian “reformation” of medicine and natural philosophy. Some scholars have noted the Paracelsian exegesis of the Genesis creation story, utilized by Paracelsian iatrochemists to counter “pagan” Galenic medicine. Yet, Paracelsus’s idiosyncratic theology and its inter-confessional reception receive scant attention. I will note Paracelsus’s teaching on the “new creation” by Christ and characterize his radical spiritualism—Paracelsus extolled the spiritual unity of all true believers while criticizing institutionalized Christendom, the “Mauerkirche.” I will also touch on his theological reception, which occurred in a heterodox and usually clandestine setting. The latter was significant to Paracelsianism and a compelling example of complex relationships across confessional boundaries during the Reformation.

- Downing A, Sudhoff E. 2018. Pressurized Air Mattresses and Positioning Techniques to Decrease Pressure Ulcer Incidence

Hospitals provide wonderful care for people who are at their worst; however, complications have the potential to arise in every patient’s hospital experience. One complication that has become more common in healthcare is that of pressure ulcers. A pressure ulcer is defined as an inflammatory process to a specific area due to prolonged

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exposure to external pressure (Ricci et al.,2013). Pressure ulcers are a completely preventable complication, yet the incidence of them continues to increase. Some factors that lead to this problem is the lack of education, knowledge deficit, the shortage of staff, and lack of time (Tallier et al,2017). Since pressure ulcers are preventable, we wanted to find the best solution to fix the problem. We did this by comparing the use of pressurized air mattresses with frequent manual repositioning of the patient. Pressurized mattresses are very elastic, which helps distribute the weight of the patient throughout, decreasing the risk of bed sores from developing compared to that of frequent manual repositioning which is already an established part of pressure ulcer prevention. Both interventions had strengths and weaknesses to their uses and both need to be further looked at and discussed to see their effectiveness in preventing the occurrence of pressure ulcers.

- Faragher M. 2018. "PRIDE IN THE BRITISH ACHIEVEMENT": Britain in Pictures and the Quantification of Propaganda

Beginning in 1941, the first of 132 short books about the history of Britain and its culture was published through collaboration between Collins and Ad Print, and produced through a backdoor commission by the Ministry of Information. This series, called Britain in Pictures, attempted to show the depth and significance of British cultural contributions to a global audience. Particularly, the book series sought to woo British colonies and other neutral countries, who were susceptible to German propaganda which lambasted Britain as hypocritical colonizers of the worst order. This project will use the methods of digital textual analysis to explore the nature of propaganda at a quantitative level in Britain in Pictures. Using OCR (optical character recognition) versions of the texts and the textual analysis tool Voyant, the poster will demonstrate how patterns and themes of language usage and word proximity in the series helped produce effective Allied messaging across the world.

- Follo G. 2018. A Preliminary Look at Risk of Violence and Self-Defense in Tijuana, MX

The purpose of this research was to administer Smartsafe, an empowered reality-based self-defense program, to women and girls in Tijuana, Mexico and investigate the experience of women and girls in Smartsafe seminars. Using a convenience, purposive sample, I approached the girls and women who completed the seminars. Through consent and assent, I collected forty surveys. Within the forty surveys, three aggregate groups emerged: girls eight to thirteen years of age; women over the age of thirteen; and private school teachers. This poster is a presentation of the survey findings in the areas of risk of violence perceptions, self-defense perceptions and my observations from conversation within the community and environment. The findings suggest that the lived reality of the girls and women in Tijuana, Mexico reflect their observed sense of urgency in the self-defense seminars.

- Fulks M, Axe S, Baker B, Blakeley M, Dorsch S, Hoying J, Rindler B, Venters T, Winner B. 2018. Ohio Middle Level Association's Annual State Conference, "Put Your Gears in Motion"

With the help of two generous grants provided by WSU's Lake Campus, Middle Childhood pre-service teachers were able to attend the annual state conference and also present reading strategies during a break out session on adolescent literacy. More than 50 teachers, administrators and pre-service teachers attended our session. We received outstanding feedback, including an invitation to present during a professional development day for Cedarcliff Schools' K-12 Teaching Staff in Cedarville, Ohio.

- Goettemoeller K, Spangler T. 2018. The Effect of Intergenerational Interactions on Elderly Quality of Life

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As the geriatric population grows, it is imperative for nurses to understand how to better care for them. We are researching the effect of late-life depression on the elderly population, and how it relates to their quality of life. We are wondering if there are better treatment options to use in combination with existing pharmacological treatment in order to decrease elderly depression rates. Through academic research, we have found that the nonpharmacological use of intergenerational programs for the elderly has shown significant positive results relating to their mental and emotional health. Intergenerational programs are an important intervention to be implemented into every community to enhance elderly quality of life.

- Grimes K, Sobe T, Richardson K. 2018. Healthcare and Hispanic Americans

Some Hispanic Americans encounter challenges in their daily lives that affect their health outcomes. For example, many Hispanic Americans work long hours at lower wages. Further, many face discrimination due to communication barriers. Family, faith, and church are often important cultural center points that unite a Hispanic communities, and considerations of these aspects should be taken into account. Hispanic-Americans are at a higher risk for heart disease, diabetes, and obesity. As a health care provider, it is important to have knowledge of the cultural differences involving spiritual beliefs, nutrition, and preference of medical treatment to provide the best quality of care.

- Harshbarger J, Fullenkamp M, Lefeld M. 2018. Greek Culture and Healthcare

The Greek culture is unique from other cultures, and it important to consider the differences they possess when taking care of a patient in the health care setting. In the United States there are over one million Greek Americans living throughout the country. Our research project will review the communication style, space, social organizations, time, environmental control, and biological variations in regards to the Greek culture. Greek people tend to have different views and beliefs when it comes to medical care. As a nurse, it is important to provide holistic care to every patient encountered throughout their career.

- Huelskamp D, Cavanaugh J. 2018. What Factors Do Employers Seek in Job Applicants?

In the Spring, WSU Lake Campus hosts a job fair to assist students in finding full time employment. We were curious, what are the most important factors in applicants in landing a job? Beyond the match between the job vacancy and the applicant's specific major, how important are other factors, such as GPA, activities, first impressions and work experience? To find answers to these questions, human resource representatives from various sized firms in a variety of industries is conducted. These firms are asked to rank factors that influenced their recent hiring decisions and also how closely the applicants major matched the job opening. Knowing how firms respond will help students in their current job search and inform future students on how best to prepare.

- Jacquemin SJ, Poore P, Mazzone N, Ricketts, Gnau N, Dirksen T. 2018. Nutrient Removal Potential of Constructed Wetlands in Grand Lake St Marys Watershed

Constructed wetlands are becoming an increasingly important management tool to reduce nutrient rich agricultural runoff in the Great Lakes region. The objective of this study was to assess the removal efficiency of two constructed wetlands operating on tributaries of Grand Lake St. Marys (Prairie Creek and Coldwater Creek) located in northwest Ohio. Water samples were collected weekly during summer and fall 2017 (N=24) from inflow and outflow points where they were analyzed for nutrient (nitrate-N, total phosphorus, dissolved reactive phosphorus) concentrations following standard EPA colorimetric methods. Overall, while both wetlands experienced high mean nutrient inputs (concentrations in mg/L) across both fall and summer seasons ranging from 0.4 to 4.3 NO₃⁻, 1.1 to 1.7 TP, and 0.2 to 0.6 DRP, respectively, high removal efficiencies (often in excess of 75%) produced significantly reduced outflow concentrations (paired t tests; p<0.05) largely consistent with EPA recommended TMDL target values for watersheds of these size (~20mi²: 1.0 mg/L NO₃, 0.10 mg/L TP). Extending

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these concentration reductions to effect size and loading impact, mean monthly stream discharge rates compared with wetland discharge data (continuously monitored using pressure transducers) revealed that PC and CC Treatment Train Wetlands were found to have processed an average of 10% to 29% of flows during summer and 40% to 35% of flows during the fall season, respectively. This study demonstrates the importance of constructed wetlands towards freshwater conservation strategies.

- Junker C. 2018. An Intersectional Analysis of Wallace Stegner's *Angle of Repose*

If Wallace Stegner's 1971 novel Angle of Repose has a central question, it might be: how do people make their spaces and lives habitable? What configuration does it take to reach the "angle of repose," the space at which loose pieces can remain in place, stable? For the narrator of the novel, Lyman Ward, who calls himself a "Nemesis in a wheelchair," making his daily life habitable consists primarily of his ability to escape, which he accomplishes through writing – and thus imaginatively inhabiting — his grandmother's life in the American West. Embedded within Lyman's narrative is the novel he is writing about Susan Ward, whose attempts at habitability also rely upon the way that she (re)writes the "uncivilized" Western space in order to make it picturesque for both herself and her Eastern readers. For both Lyman and Susan, their own spaces and their own bodies must be altered, if only imaginatively – dominated and molded so that they better meet their expectations and ideals. For these characters, what makes space and bodies habitable or un-habitable is based on a number of assumptions about gender, class, ability, and space itself, assumptions that have been recently called into question in the fields of ecocriticism, feminism, and disability studies. Yet, most of the critical scholarship on this novel has focused on either the ecocritical implications or the feminist complications of the novel. Rarely has Angle of Repose been examined in light of both ecocriticism and feminism together, and never has it been read through the lens of disability studies. This project analyzes the tangled relationship between ability, space, and gendered bodies through the lenses of disability studies, ecocriticism, and ecofeminism. My analysis of this work reveals the perils of considering states of embodiment and social categories of identity as independent from one another and offers the opportunity to examine how bodies, space, and writing are entangled and enmeshed.

- Lageman A, Ketler S, Meyer L. 2018. Jewish Culture: A Glance into Cultural Healthcare Practices

The goal of nursing is to provide quality care to diverse populations across a range of cultures. Cultures vary when it comes to communication, space, social organization, time, and environment. In the United States, approximately 2.2% of the population identifies as Jewish. While this may seem like an insignificant amount it is still important that we provide the best quality of care and take their beliefs and practices into consideration. Our presentation will focus on how to provide competent care to the Jewish population. We will further assess common diseases associated with the Jewish culture and investigate how their beliefs affect their healthcare, nutrition, family roles, and daily life.

- May K, High Q, Homan H. 2018. Cultural Healthcare Practices in the Arab American Community

Arab immigration peaked in the United States between 1880 and 1945, in some part due to economic hardships. The majority of immigrants came from Syria, who were forced to seek elsewhere for refuge from liberation/civil wars from the Ottoman Empire. As of today, 3.5 million Americans can trace their roots to an Arabic country. There is religious diversity among this population. Seeking education is the primary reason for immigrants coming to the U.S. today, migrating with their families and living in communities. From a cultural perspective, it is important for health care providers to understand customary practices and beliefs within Arab American society. It is essential for nurses to incorporate these beliefs when providing healthcare and understanding the different gender roles male and females play in their culture.

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- Menker M, Schneider R, Felver J, Post J. 2018. Amish Culture and Healthcare

The Amish culture is very predominant in our area and have been influencing the culture surrounding us since the 18th century. Amish typically follow strict gender roles; women oversee the housework and the men are in charge of the field work. The women are heavily relied on to care for the members of the family, typically eight to nine members. The Amish culture is one of strong spiritual belief; they use their beliefs as a guideline to live their lives. This presentation explains the Amish culture and defines their culture as a whole. Living in a community where the Amish have a strong influence, it is essential as health care providers to be competent in all aspects of other cultures.

- Moody C. 2018. Adolescent Stress and the Impact of School Start Times

The proposed research is designed to address the effects of school start times on stress levels of adolescents. Participants of approximately 200 summer camp attendees will be randomly assigned to two different camp start times. Problem questionnaires will be administered on the first and last day of the summer camp to assess perceived level of stress in domains of school, parents, and self; total sleep time, wake times, and bed times will also be assessed. Because adolescence is a transitional phase which produces development in the cognitive, physical, social, and behavioral realms, it is vital to examine if early school start times are contributing to adolescent's perceived stress, thus producing negative consequences. It is expected that students who are in the early start group and have early wake times will report higher levels of stress and less total sleep time.

- Rollins S. 2018. Effect of Marriage on Psychological Well-Being

This proposed study will examine the effect of marriage on psychological well-being. The sample for this study will be engaged students recruited from Christian colleges. This population is useful to recruit from because they will presumably have long engagements but also will not be cohabitating. Participants will participate in either marriage counseling or individual counseling and their levels of depression, emotional support, and marital stress will be tracked over the course of six years. The research hypothesis is that the patterns of psychological well-being seen in marriages are caused by the psychological well-being a person brings into the marriage. Therefore, it is expected that individual counseling will cause improvements in both psychological well-being and marriage quality, while marriage counseling will show improvements in marriage quality but will fail to show significant changes in psychological well-being.

- Schwartz A. 2018. The Influence of Socioeconomic Status and Environmental Stressors on Suicide Rates in Young Adolescents

The purpose of this proposed study is to examine the effect of socioeconomic status and environmental factors (unemployment, mental illness, etc.) on suicide rates in young adolescents. Participants will participate in a survey that asks a series of questions about social status, environmental questions, and if they have attempted suicide. The expected outcome of these results would be an increase in attempted suicide rates for lower socioeconomic status teens that are facing environmental stressors.

- Sheriff E, Post K. 2018. In Newborns, Does Exposure to Maternal Drug Use Compared to no Maternal Drug Use While In Utero Influence Birth Defects?

It is not uncommon for individuals to have drugs in their systems daily in the society we are currently living in. Life gets tough and sometimes people run to drugs and alcohol for a coping mechanism- without ever realizing

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the effects it has on their bodies. For pregnant women, illicit drug use during pregnancy is highly frowned upon and even severely dangerous for the fetus. Drugs and alcohol can cause premature birth, stillbirth, miscarriages, cardiovascular problems, respiratory problems, neurovascular problems, and many more different systems of the body is affected. Tobacco is most frequently used substance during pregnancy while alcohol, cannabis, and other illicit substances are often utilized. Polysubstance, use of two or more drugs or alcohol, is common during pregnancy. Not only are illicit drugs bad for everyone, but they are also detrimental to the growth and development of a fetus. Every single person's body metabolizes drugs at different rates, which makes it hard to accurately determine how much is too much. Therefore, medical professionals tell pregnant mothers that no alcohol or drug use is safe for the fetus. A national statistical study done by the National Institute on Drug Abuse, every twenty-five minutes a baby is born addicted to opiates. There are few existing treatments for prenatal substance use. This research project provides information for the drugs involved in prenatal exposure including nicotine, alcohol, marijuana, opiates, cocaine and methamphetamines and their effects on the fetus and newborn.

- Sieftring M, Homan E. 2018. Patient to Nurse Ratio and Risk of Ventilator-Associated Pneumonia in Critically Ill Patients.

Throughout the last several years, there has been a growing need for increased numbers of registered nurses in hospitals. This is due to the increase in acuity of patients as well as the patient's shorter lengths of stay. The organization, technology, and push towards a more effective and cost-efficient system is always a priority. However, patients in critical care settings have been recognized to be affected the most by nurse-patient ratios. Although all patient wards are of great importance, individuals in the intensive care unit have the most demanding medical issues that require vigilant care. Research has revealed that the workload and resources used by nurses has a direct effect on the overall patient status. Therefore, it is imperative that the safety and quality of patient care reflects the nurse/patient ratio, and the knowledge and experience of the staff. It has been proven that nurse to patient ratios have a direct correspondence to hospital acquired infections such as ventilator associated pneumonia. So why do healthcare systems not take this into account when staffing nurses on their units? There are various strategies that can be carried out to properly staff employees when dependent patients are relying on the nurse's care throughout their hospital stay. Within our project, we have compiled research to evaluate nurse to patient ratios in ICU settings to present information from various sources in regards to whether or not having a 1:1 nurse to patient ratio is effective in decreasing the risk for ventilator associated pneumonia and adverse effects.

- Simons C. 2018. Instructional Design for Online Learning

Online learning provides the benefit of convenience, particularly to non-traditional students who work full time and care for a family. However, teaching and learning online poses several challenges including lack of student engagement. Students often feel isolated and may not have the motivation they experience in face-to-face class settings. Overcoming these challenges begins with effective course design following Quality Matters principles. This poster describes Quality Matters requirements and demonstrates how its principles are implemented in my online classes to improve student learning and engagement.

- Simons C. 2018. Competency-Based Education: A New Pedagogical Model

A national debate has been brewing about the ability of the current credit-based system in higher education to meet the needs of non-traditional students. In the credit-based system, students pay for a certain amount of credits (typically 120) which they must earn by passing required courses to get a degree. For an undergraduate degree, this generally takes four years. The problem is that seat-time generally does not correlate with what graduates can do when they complete their programs. Furthermore, credit-based programs can be isolating to non-traditional students who lack access. Therefore hundreds of universities in the US including Michigan State

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University and Purdue have been experimenting with a new model in higher education that is based on competency instead of number of credits accumulated. In other words, students are assessed based on what they can do rather than what they know or the time they spend in the classroom. This poster illustrates how this model works and how it can be implemented.

- **Simons C, Henry N. 2018. Glycemic Index of Pinto Bean Fortified Breads**

Pulses are known to digest slowly due to the presence of resistant starches. Hence they are described as having a low glycemic index. This is excellent for people with diabetes or those who are concerned with weight management. Therefore, pinto bean starch was extracted from dry pinto beans, and added to bread formula at 5%, 10% and 15% to determine effect on expected glycemic index (eGI). The study found that eGI of bean-fortified bread was not significantly lower than white bread. This is possibly due to complete gelatinization of native bean starch and hence increased susceptibility to digestion by α -amylase enzymes. Hence, due to the poor retention of resistant starch in native pinto bean starch, the addition of pre-prepared bean resistant starch in the form of RS3 to bread is recommended as a better approach to lower glycemic index.

- **Simons C, Henry N. 2018. Production of Low-Glycemic Index Ingredient from Pinto Beans**

Although native bean starches have a high concentration of resistant starch (RS), retention is poor after cooking and gelatinization. However, if pre-prepared RS starch in the form of RS3 is added, better retention will be realized due to its high thermo-stability. Hence, in this study, a method was developed to produce a new RS ingredient from pinto bean starch which has a low expected glycemic index of only 20. Adding this ingredient to breads and bakery products is likely to be very effective in controlling blood glucose in diabetes patients.

- **Simons C, Henry N, Stachler M. 2018. Milling and Fractionation of Pulse Flours**

Utilization of pulse flours is increasing worldwide due to their health benefits. One way to expand product utilization is to mill and fractionate pulses according to particle size. This could potentially produce product fractions with differences in composition and functional properties. However it is important as a first step to determine percentage yield of fractions. Hence, twelve pulses (pinto bean, navy bean, black bean, black eyed pea, lentil, split pea, small red bean, mayocaba bean, chick pea, lima bean, kidney bean, and great northern bean) were milled at 10000 rpm using a centrifugal mill and then fractionated for 20 minutes using a Ro-tap sieve separator. Particulates were separated on 20, 30, 40, 60, 70, and 80 mesh sieves. The percentage fractions obtained showed significant differences indicating variability in hardness and fracturability. Chickpea produced the lowest percentage flour (5.6%) while lima beans produced the highest (23%). In a further study, pinto beans were milled at different speeds (6000, 8000, 10000, 12000, 14000, 16000, and 18000 rpm) to determine effect of speed on flour yields. Flour yield at 6000 rpm was 14.16 % and did not increase significantly by doubling speed to 12000 rpm. However, yields gradually increased significantly from 15.32% at 14000 rpm to 20.89% at 18000 rpm. This data is important for estimating the lowest energy consumption for the highest flour yield.

- **Simons C, Henry N. 2018. Color Evaluation of Canned Black Beans**

Black beans get its color from the presence of anthocyanins in the seed coat. Anthocyanins are phytochemicals that act as antioxidants, reducing free radical damage and aging in the body. Therefore, it is necessary to minimize anthocyanin loss during cooking. One approach is to breed for varieties that demonstrate high anthocyanin retention. Therefore, six black bean varieties (Loreto, Jet, Zenith, Zorro, Eclipse, and T-39) were obtained from North Dakota State University - Bean Breeding Program. The beans were soaked for 17.5 hours, and then canned in glass jars using an autoclave at 121 oC for 25 minutes. Color retention was then determine using a hand-held colorimeter. Black color retention in varieties, based on calculated chroma and hue angles

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indicated the following order: Zenith > Zorro > T-39 > Loreto > Eclipse > Jet. This result supports previous work using a more sophisticated color measurement system. Therefore, this study demonstrates that a simple hand-held colorimeter can be just as effective in differentiating color between varieties of cooked black beans.

- Sterling T, Patton L, Short A, Lowry A. 2018. Jehovah's Witnesses: A View Inside the Health Care World

Jehovah's witness is a group currently comprised of 8.45 million members. This religion originated in the 1870's from Pittsburgh, Pennsylvania and was founded by Charles Taze Russell. This once small religion has now branched globally. The international headquarters is located in Warwick, New York and currently create literature on their interpretation of the Bible. Members of this religion are best known for spreading the word by heading door to door and passing out pamphlets such as "The Watchtower" and "Awake!" With this religion comes several medical exemptions that a nurse must recognize. The most common exemption is related to blood. Since Jehovah's Witnesses are becoming widely apparent, it is important for nurses to understand the rules of the religion in order to be a competent nurse.

- Stomel JM, Longsworth L. 2018. Expression and Purification of TAQ Polymerase

Taq polymerase is a heat stable DNA polymerase and functions as the workhorse enzyme in any molecular biology lab. It is the primary tool used in performing PCR (Polymer Chain Reaction) experiments where DNA is replicated up to 10¹⁷ times its original concentration. PCR is also the bedrock technology for many other tests in molecular biology. In this project, we demonstrate a method to clone, express, and purify Taq polymerase using equipment and facilities here at the lake campus.

- Will N, Heckler K. 2018. Benefits of the Use of Medical Marijuana in Children with Epilepsy

Medical marijuana is a major controversy. Several states are legalizing medical marijuana use medicinally and recreationally. While the states are passing these laws, the nation still defines medical marijuana as illegal, which also adds to the controversy. The use of medical marijuana in children further contributes to this problem. Despite the stigma against medical marijuana, there are still people traveling across the country in order to get to a state in which they can use medical marijuana for the treatment of their children's seizures. If medical marijuana would help decrease or even eliminate seizures for children with epilepsy, why not give it a chance? More research of the subject could lead to an effective treatment to decrease the seizures of epileptic children.

- Wilson DH. 2018. Natural Complexions.

Natural Complexions is a collection of satirical vignettes and "docufictions" that explore the dynamics of contemporary American media pathology. Extrapolated from actual news stories, spam emails, advertisements, social networks, and other scraps of disposable infotainment, the book punctuates the absurdist spiritus mundi that galvanizes the cultural landscape. Wilson ultimately depicts the relationship between nature and technology through the interactions of over 100 characters, among them movie stars, ex-presidents, televangelists, motivational speakers, con artists, back-alley philosophers, forensics experts, Biblical kings, and a mysterious trickster named Brian Gonka who haunts the pages of the narrative like an electric ghost.

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