

NKU Faculty Research, Scholarship and Creative Activity Highlights

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RACHEL BOSCH

Lecturer, Physics, Geology, and Engineering Technology

12/1/2021

[Dr. Bosch publishes an article describing the investigation and characterization of a debris flow deposit deep inside Mammoth Cave.](#)

This work presents an analysis of a debris flow deposit below Earth's surface in the Mammoth Cave System in Kentucky, USA, and is the first study to characterize an in-cave debris flow to this level of detail. The deposit, named Mt. Ararat by cavers, has a maximum thickness of 7 m, a head-to-tail length of 75 m, and a total volume of about 3400 cubic meters, as determined by terrestrial LiDAR and electrical resistivity surveys. The deposit is chaotic, angular, matrix-supported, and roughly inversely graded, with grain sizes, quantified through various grain-size distribution measuring techniques, ranging from clay through boulders larger than 1 m. The clasts are predominantly Mississippian Big Clifty sandstone, which is allochthonous in this part of the cave. The angularity of the blocks in the deposit indicate that they had not experienced significant erosion; and therefore, are determined to have been transported only a relatively short distance over a short time. The deposit profile is compound in appearance with two heads. We thus interpret this as a debris flow deposit resulting from two distinct flow events, and present a chronology of events leading to the present-day Mt. Ararat in Mammoth Cave. The findings of this work will inform further studies of karst-related erosional events, sediment transport, and deposition at different scales in karst aquifers, as well as the ways in which surface and subsurface processes interact to contribute to karst landscape evolution.

* Bosch, R., Ward, D., Bird, A., Sturmer, D., & Olson, R. (2021) A debris flow deposit in Mammoth Cave: field characterization. *Journal of Cave and Karst Studies*, 83 (4), 151-162.

CHRISTINE PERDAN CURRAN

Professor, Biological Sciences

12/7/2021

[Curran Lab publishes journal article identifying genes that increase risk following exposure to widespread pollutant](#)

Two undergraduates in the laboratory of Dr. Chris Curran were co-first authors on a recent peer-reviewed publication regarding genetic risk to benzo[a]pyrene, a common pollutant found in traffic-related air pollution, grilled food and cigarette smoke. Using a mouse model with genetic differences in a key biochemical pathway, the research group identified two genes that increase susceptibility to neurotoxicity in offspring exposed during pregnancy and lactation. The research included 17 NKU undergraduates and statistics collaborators in the KY-INBRE network.

NKU Faculty Research, Scholarship and Creative Activity Highlights

* Honaker A, Kyntchev A, Foster E, Clough K, Hawk G, Asiedu E, Berling K, DeBurger E, Feltner M, Ferguson V, Forrest PT, Jenkins K, Massie L, Mullaguru J, Niang MD, Perry C, Sene Y, Towell A and Curran CP. 2022. The behavioral effects of gestational and lactational benzo[a]pyrene exposure vary by sex and genotype in mice with differences at the Ahr and Cyp1a2 loci. *Neurotoxicology and Teratology*. Volume 89, 107056.

ALLYSON S. GRAF

Assistant Professor, Psychological Science

1/23/2022

[Collaborative work between Dr. Nikzad-Terhune, Dr. Graf, and Dr. Kim published in Educational Gerontology](#)

This exploratory study highlights empirical findings from faculty and students at a growing metropolitan university with no current gerontology program or gerontology certificate program. The present study employed cross-sectional, quantitative survey research to identify experience, interest, preparedness, and barriers expressed by university faculty and students in regard to addressing a rapidly aging society. Findings contribute to preexisting literature and offer new insight and feasible recommendations for faculty in all university departments to expand gerontological education opportunities. All three co-authors are founding members of NKU's Age-friendly Coalition. To find out more or to get involved in these efforts, please contact Dr. Graf, grafa1@nku.edu.

* Nikzad-Terhune, K., Graf, A. S., & Kim, S-h. (2022). Recommendations for promoting university wide gerontological education: findings from an exploratory study. *Educational Gerontology*. Advanced online publication.

SUSAN GRIEBLING

Associate Professor, Department of Teacher Preparation and Educational Studies

12/31/2021

[Dr. Griebling and Dr Yates publish an article on a way to help struggling students.](#)

Research suggests that student-centered inquiry learning shows promise for lower-achieving students and that students who are struggling in school participate more fully and demonstrate competency to themselves and others. This research presents a multiple case study of three middle-level students who were struggling in school, both at participating in class and performing the work. Results show how they responded positively to student-centered inquiry learning. Evidence suggests inquiry learning improved these student's dispositions to learning. This methodology allowed these students to build a relationship with and trust in their teacher, discover a purpose for school content and transformed their teacher's perspective of them as learners. The importance of this study is that inquiry learning was effective as a positive intervention for these students, enabling them to grow in academic performance and attitude towards school. The results of this study can be used by educators looking for alternative ways to reach students and improve overall performance.

* Griebling, S., Yates, K., Waspe, N., (2021). Unlocking the Potential of Struggling Students: One Teacher, Student-centered Inquiry Learning and a Makerspace. *Journal of Ethnographic and Qualitative Research*. 16 1935-3308.

NKU Faculty Research, Scholarship and Creative Activity Highlights

LEE KERSTING

Associate Professor, Accounting and Business Law

4/2/2021

[Dr. Kersting publishes article highlighting how tournament design choices can enhance or detract from productivity and/or fostering innovation.](#)

As the trend toward gamification in business increases, so has managers' use of tournaments to achieve productivity gains and foster innovation. Associated with this growth in tournament usage is the need for managers to have a greater understanding as to how tournament design choices can enhance or detract from such gains. In addition to synthesizing much of the tournament design literature, we elaborate upon an experiment that examines the effects that tournament horizon and differences in ability among employees have on employee productivity.

* Kersting, L., Krumwiede, K., Marley, R., & Mellon, M. (2021). Employee tournaments: One size does not fit all. *Management Accounting Quarterly*, 22(3): 9-17.

YOUNG SANG KIM

Professor, Economics and Finance

9/29/2020

[Dr. Kim publishes an article on Pacific Accounting Review](#)

This study aims to investigate whether shareholders are convinced by earnings management and also explores how board gender diversity (the presence of female directors on the board) may influence the extent to which shareholders are convinced by earnings management. We estimate the stock market reactions to the September 11 terrorist attack using the standard event study methodology and cross-sectional analysis to investigate whether the market reactions are influenced by the extent of earnings management. Furthermore, we test how board gender diversity affects the degree to which earnings management influences the stock market reactions. The study results show that the market reactions to the attack are substantially mitigated for firms that exercise more upward discretionary accruals, implying that earnings management is successful in convincing shareholders. Additional analysis corroborates the results, including propensity score matching, instrumental variable analysis, and using Oster's (2019) method for testing coefficient stability. Crucially, the authors find that board gender diversity helps shareholders see-through earnings management better. The presence of female directors significantly weakens the extent to which shareholders are persuaded by earnings management.

* Ongsakul, V., Jiraporn, P. and Kim, Y.S. (2020), "The effect of earnings management on shareholder value and the role of board gender diversity: Evidence from terrorism", *Pacific Accounting Review*, Vol. 32 No. 3, pp. 323-334.

NKU Faculty Research, Scholarship and Creative Activity Highlights

JESSICA KRATZER

Associate Professor, Communication

1/1/2022

[Dr. Kratzer publishes book chapter about senior citizen sex and intimacy with fictive case study](#)

For most people, the goal in life is to live as long as possible. We may not want to be old, but in order to live a long life we must get older. Youth is valued in American culture much more than aging, so there is a great focus on younger people, especially when discussing sex. In order to understand how aging affects our relational, communicative, and sexual lives, information regarding senior citizen sexual communication must be explored. This chapter focuses on sexual activity and communication in our aging population. It includes five areas of aging sexuality: (1) language used to describe the aging population, (2) changes in sexual activity as one ages, (3) residential living, (4) creating and redefining intimacy, and (5) college students' perspectives on aging and sex. The chapter concludes with a fictive case study.

* Kratzer, J. M. W. (2021). Lifelong communication: Senior citizen sex and intimacy. In Manning, J., & Carey, N. M. (Eds.) Contemporary Studies of Sexuality & Communication: Theoretical and applied perspectives (pp. 117-134). Dubuque, IA: Kendall Hunt.

JESSICA KRATZER

Associate Professor, Communication

12/1/2021

[Dr. Kratzer publishes book chapter about communication regarding physical and physiological changes for aging adults](#)

This chapter explores the physical and physiological changes that affect the sex lives of aging adults including stigma and misconceptions, sexual desire and functioning, relational issues, healthcare issues, and affirmative old age.

* Kratzer, J. M. W. (2021). Aging adult sexuality: Talking through physical and physiological changes. In Coffelt, T. (Ed.), Interpersonal Sexual Communication across the Lifespan. (pp. 151-163). New York: Peter Lang Publishing.

NKU Faculty Research, Scholarship and Creative Activity Highlights

DEBRA MEYERS

Professor, History

11/18/2021

[Dr. Debra Meyers co-edits an anthology dealing with misogyny](#)

Hating Girls is a collection of cutting-edge essays addressing the pervasive problem of misogyny from an intersectional framework, particularly focused on identities of gender, race, class, sexuality, and religion. Scholars, activist reformers, and social justice practitioners offer multiple perspectives of the misogyny that dominates our culture providing both macro-views as well as case studies in the United States. This interdisciplinary analysis exposes the destructive, oppressive beliefs and practices inherent in our society and offers a progressive, equitable way forward.

* Debra Meyers and Mary Sue Barnett, eds. Hating Girls: An Intersectional Survey of Misogyny (Brill, 2021).

DEBRA MEYERS

Professor, History

3/18/2020

[Dr. Debra Meyers co-edits and anthology on the Crisis in the Roman Catholic Church](#)

“This superb collection of essays provides Catholics with a series of high-powered lenses for examining the monolith of clerical corruption that has thwarted Gospel justice in the 21st century. Moving us deeper into the root causes behind today’s painful headlines, individual contributors not only demonstrate the power of feminist analyses in exposing the long arc of sacralized misogyny and sexism, they unflinchingly expose prelates who cover up crimes and illuminate the power of the #MeToo movement to shift the narrative and expose the lackadaisical reporting by media outlets on the abuse of women religious in recent years. Overall, these contributors remind us that muscular correctives are available and being engaged against a rotting clericalist system. They illuminate critical remedies for holding Catholic clerics accountable, establishing full equality for women, and transforming hierarchical concepts of authority, power, and gender in order to carry out the work of the Gospel for today’s world.” — Deborah Rose-Milavec, Future Church Co-Director

* Debra Meyers and Mary Sue Barnett, eds. Crisis and Challenge in the Roman Catholic Church: Perspectives on Decline and Reformation (Lexington Books: academic division of Rowman and Littlefield, 2020).

NKU Faculty Research, Scholarship and Creative Activity Highlights

KALIF E. VAUGHN, KATHLEEN FUEGEN, PERILOU GODDARD, and DOUGLAS S. KRULL

Assistant Professor, Associate Professor, Professor, Professor – Department of Psychological Science

[Dr. Vaughn and colleagues publish article on self-testing websites](#)

Research has demonstrated that retrieval practice (i.e., self-testing) promotes student learning, but the bulk of the research has been conducted in laboratory settings using contrived materials. We investigated the effects of retrieval practice on exam performance among college students. Across six university-level psychology courses, we created self-testing websites for our students. Students could access these websites throughout the semester in preparation for their exams. Overall, using the self-testing websites was associated with improved exam performance. Across both studies, repeated self-testing (measured via the total number of test trials) was associated with improved exam performance even when controlling for GPA. In Study 2, we found that approximately 91% of students utilized these websites at least once during the semester. These results suggest that self-testing websites offer a low-cost method to improve student learning for both low-performing and high-performing students. Teachers can substantially improve their students learning by creating self-testing resources accessible outside the classroom.

* Vaughn, K. E., Fuegen, K., Goddard, P., & Krull, D. S. (2021, December 16). The Influence of Self-Testing Websites on College Exam Performance. *Scholarship of Teaching and Learning in Psychology*. Advance online publication.

EILEEN WEISENBACH KELLER

Professor, Assistant Dean - Marketing, Sport Business and Construction Management

4/13/2021

[Drs. Raska and Weisenbach Keller's research explores the connection between pedagogy and economic empowerment](#)

To assist marketing students during their college experience we developed, over the course of ten years, an innovative approach to teaching that connects classroom education, career finding and job-skill development. This method diminishes student and employer concerns about how or if a curriculum enables a student to find their way to a career and provides them the competence and confidence (we call this combination courage) to pursue it. We linked two required courses, one student organization and many companies together to create the Underground Agency. The Agency is made up of client-based projects in two courses. Select students from these then work on "shadow projects", organized through the marketing club, where student volunteers finish projects under the supervision of client/company volunteers. What makes this approach unique relative to existing methods of experiential learning is the fundamental shift in students' and instructors' mindsets: the classroom is transformed into a career-related job setting complete with onboarding, training and recruitment. Student and client impact are significant as measured by the Gallup Big Six, NACE Work Competencies and Career Management Skills. Faculty who embrace Experiential Learning will find this to be the next step in advancing their impact on students, employers and curriculum.

* David Raska & Eileen Weisenbach Keller (2021) TURNING MARKETING CLASSROOMS AND A STUDENT ORGANIZATION INTO AN ENGINE OF ECONOMIC EMPOWERMENT, *Marketing Education Review*, 31:2, 175-182,

NKU Faculty Research, Scholarship and Creative Activity Highlights

Other Research News

ISABELLE LAGADIC

Associate Professor, Chemistry and Biochemistry - Director, STEM-International Research & Scholarly Exchange Program

[Dr. Lagadic receives Outstanding Intrapreneur Award 2021 in Education from the Global Intrapreneur Institute](#)

The Global Intrapreneurs Institute is an on-line educational institution and community committed to supporting and advancing the work of intrapreneurs in all sectors and in all corners of the world through learning and development. Dr. Lagadic was recognized for her work in providing international research experiences to NKU STEM students and creating similar opportunities for international STEM students to engage in research at NKU.

JEFF VARRONE and ZACH STROBL

Assistant Director for Center for Innovation and Entrepreneurship and Lecturer
1/7/2022

[Entrepreneurship Faculty Members, Jeff Varrone and Zac Strobl present at USASBE conference](#)

Northern Kentucky University's Center for Innovation and Entrepreneurship faculty members- Jeff Varrone and Zac Strobl, along with its business partner, Inphlu, led by Joshua Reid, shared a powerful online tool available for universities to provide professional online pathways for student success. The session discussed how to integrate this platform into existing classes to provide students with an experiential learning opportunity.

* Varrone, J & Strobl, Z. (2022). Student Entrepreneurial Success through Professional Online Pathways. United States Association for Small Business and Entrepreneurship (USASBE) Conference, Raleigh, NC. January 7, 2022.

Do you have research, scholarship or creative activity to share?

Use this [link](#) to submit for the next edition.

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