Tech EDGE 2022 Spring Conference
Digital Equity, Rural Education and Post-COVID-19 Learning Environments

FEB 12 Saturday, February 12, 2022

🕐 07:30 AM - 01:15 PM

📍 UNK College of Education

\# #unktechedge

Tech EDGE is FREE and open to educators, but registration is required. Register for Tech EDGE.

All sessions are Bring Your Own Device (BYOD)

WELCOME: Dr. Mark Reid, Dean, College of Education

KEYNOTE SPEAKER: Brad McLain, Ph.D., Executive Director, Center for STEM Learning, UC Boulder

SCHEDULE OVERVIEW

Time	Session	Location
07:30 - 08:30 AM	Registration, Continental Breakfast	College of Education Atrium
08:30 - 08:45 AM	Welcome	College of Education Atrium
08:45 - 09:45 AM	Keynote Speaker	College of Education Atrium
10:00 - 10:30 AM	Session A (1, 2, 3)	College of Education
10:45 - 11:15 AM	Session B (1, 2, 3)	College of Education
11:30 - 12:00 PM	Session C (1, 2, 3)	College of Education
12:15 – 1:15 PM	Session Workshop	College of Education

CONFERENCE PROGRAM:
unk.edu/techedge

FREE REGISTRATION (Continental Breakfast & Lunch Included):
https://www.unk.edu/academics/coe/unk-tech-edge-conference.php

REGISTRATION DEADLINE:
February 10, 2022

For more info about Tech EDGE Conferences, visit
http://cehs.unl.edu/tlte/techedge/ and unk.edu/techedge

UNK COLLEGE OF EDUCATION

University of Nebraska System

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KEYNOTE SPEAKER

Dr. Brad McLain
University of Colorado, Boulder

Brad McLain is a social scientist who serves as a Director of Corporate Research at the National Center for Women & IT (NCWIT), and as Executive Director for the Center for STEM Learning at CU Boulder. Brad's research focuses on identity development, diversity and inclusion in relation to STEM learning and career pathways, including the nature and impacts of transformative experiences and how such experiences may change our sense of self and life trajectories at different ages. Brad has served as principal investigator on several research and project grants funded by both government and corporate entities. He also has extensive experience in informal and formal science education and teacher professional development. In his role at NCWIT, Brad participates in research, research application, and the creation of resources and strategies that organizations can use towards diversification and inclusion in workplace environments and cultures.

Prior to joining NCWIT, Brad was an assistant professor of education at the University of Colorado Denver; an educational researcher at the Space Science Institute; a multimedia instructional designer in the online learning industry; a NASA educational lead for the Space Shuttle Program, the Office of Biological and Physical Research, and the Space Science Mission Directorate; and a social science researcher at the National Center for Atmospheric Research (NCAR). He is also an accomplished filmmaker, having produced and directed three documentary features and dozens of short films. Brad has also served on the Board of Directors for the Jane Goodall Institute and as the chair of Dr. Goodall's Roots & Shoots education program. He is a nationally recognized writer and speaker — with a new book coming out in the Fall of 2022 on Designing Transformative Experiences: A Guide for Leaders. His TEDx and TEDx Youth talks can be found online along with his podcasts and blogs.

Tech EDGE UNK Planning Committee

Bryce Abbey, Kinesiology and Sports Science
Philip Lai, Communication Disorders
Kristi Buchmeier, Teacher Education Certification Office
Doug Tillman, Counseling & School Psychology
Aprille Phillips, Education Administration
Andrea Childress, Information Technology Services

Chandra Diaz, Teacher Education
Brian Artman, Teacher Education
Shawn Lienemann, COE IT Coordinator
Sherri Harms, Cyber Systems
Martonia Gaskill, Teacher Education

MASKS REQUIRED

UNK Tech EDGE Spring 2022 Conference

07:30 - 08:30 AM		Registration & Continental Breakfast	College of Education Atrium

08:30 - 08:45 AM	Welcome	Dr. Mark Reid	COE Atrium
		Dean, College of Education	

08:45 - 09: 45 AM	Keynote Speaker	Brad McLain, Ph.D.	COE Atrium

Executive Director, Center for STEM Learning, UC Boulder

Brad's research focuses on identity development, diversity and inclusion in relation to STEM learning and career pathways, including the nature and impacts of transformative experiences and how such experiences may change our sense of self and life trajectories at different ages. Brad has served as principal investigator on several research and project grants funded by both government and corporate entities. He also has extensive experience in informal and formal science education and teacher professional development. In his role at NCWIT, Brad participates in research, research application, and the creation of resources and strategies that organizations can use towards diversification and inclusion in workplace environments and cultures. Additional information here.

10:00 - 10:30 AM	Session A 1	Heather Stukey	Flexible Room, C112

Principal, Windy Hills Elementary, Kearney Public Schools

Stop and Drop that Tech! Innovative teaching does not begin on a device

With the availability of 1:1 devices, global broadband, and a demand for virtual learning, it is easy for educators to begin plan lessons with technology in mind. However, strong instructional strategies should still be the focus of any great lesson! This session will provide practical examples of how to plan and implement innovative lessons that weave technology into the learning process in an effort to build student agency and achievement.

10:45 - 11:15 AM	Session B 1	Rebecca Nelson, Ph.D., Assistant Professor,	Flexible Room, C112

Teacher Education, University of Nebraska Kearney
Dawn Mollenkopf, Ph.D., Professor, Teacher Education,
   University of Nebraska Kearney
Martonia Gaskill, Ph.D., Associate Professor, Teacher Education,
   University of Nebraska Kearney
The Four Pillars of Digitally Infused Education

Historically, face-to-face and online learning modalities were distinct, requiring educators to use pedagogical approaches uniquely aligned to these modalities. However, in the last decade, readily accessible high-speed Internet and videoconferencing systems that students and educators can access on personal laptops or mobile devices has blurred the lines, creating a merging of modalities that are now enmeshed, providing educators limitless options for merging these modes (Irvine, 2020). The current COVID-19 pandemic has further expedited this merger and, although the resulting emergency remote teaching practices implemented out of necessity are not generalizable to online learning per se, they have brought digital learning to the forefront, prompting educators with varying levels of technological knowledge and skill sets to actively engage with technology in new ways to better facilitate learn. This presentation will discuss the four pillars of digital education in the post COVID-19 era.

11:30 - 12:00 PM **Session C 1** **Paul Dye, M.S.Ed, Technology Oversight & Design**   **Live/Remote**
University of Nebraska Medical Center

Virtual Reality, 3D and 2D Learning: Overview of Data on Students' Experiences in Medicine Education

The pursuit of improved patient outcomes through the evolution in medical education is ongoing. Traditional, didactic learning methods are still utilized as a primary modality throughout medical learning (Newman & Lattouf, 2020). To address deficits in understanding and retention of learning material, experiential learning methods are increasingly employed with some success (Satterlee, 2008, p. 332). Within the realm of experiential learning are visual technologies, such as touch-interactive, 3D and Virtual Reality that offer new ways of teaching typically challenging concepts. The following presentation will cover the impact of visualization-based learning methods in medical education in relation to educational value, collaboration, conceptual skills and engagement. This impact will be quantified by data gathered from exercises in medical education, utilizing a variety of visualization modalities.

10:00 - 10:30 AM **Session A 2** **Christopher Knoell, Ph.D., Professor,**   **Conference Room, B 154**
Teacher Education, University of Nebraska Kearney

Infuse-Empower-Inspire: Reimagining Your Elementary Math Instruction

Want to maximize student learning, accommodate individual learner needs, and fall in love with teaching Math again? The Math Workflow framework leverages free technology, your current Math curriculum, & brain-based instruction to empower students to take ownership of their learning (and fill in any pandemic-related learning gaps) through the blending of:
• personalized, self-directed learning;
• assessment-based, flexible small group instruction;
• heterogenous, whole-class instruction.
Participants will leave this session with a full toolbox and an implement-tomorrow plan for their very own Math Workflow!

10:45 - 11:15 AM **Session B 2** **Toni Hill, Ph.D., Associate Professor,**   **Conference Room, B 154**
ECFA Program Director, Family Science, University of Nebraska Kearney

Olimpia Leite-Trambly, M.S.Ed, Instructional Designer,
Nebraska Wesleyan University

COVID's Cultural Accommodations

As a result of the third year of COVID-19 global health there are exciting and transformational opportunities in higher education, including attention to access for all student-scholars. In the United States, the 2020 pandemic recognition forced all universities and colleges to explore issues related to digital divide, technology access, and instructional support. This presentation will focus on campus, community, and governmental efforts to close the equity, diversity, and access gap for collegiate learners, staff, and faculty.

11:30 - 12:00 PM **Session C 2** **Keith Tran, University of Nebraska Lincoln**   **Flexible Room, C112**
Literature Review: CS Community Response to COVID-19

The recent COVID-19 pandemic has reshaped the education systems across the globe, forcing schools to adapt new emerging technologies with unknown consequences. Due to the highly contagious outbreak, normal day-to-day operations for schools and conventional teaching methods had to be modified for online platforms. To better prepare for future emergency learning, and to reflect on initiatives partaken by summer programs, secondary, and post-secondary schools in response to COVID-19, we conducted a literature review on computing education papers that investigated (1) adaptation made, (2) common practices, and (3) lessons learned from teaching during COVID-19. Finally, we'll discuss our findings and propose recommendations for best practices.

10:00 - 10:30 PM **Session A 3** **Frank Thiel, M.S.Ed, Instructional Designer,**   **Room C104**
UNK Online, University of Nebraska Kearney

Artificial Intelligence in Educational Technology:
Separating Fact from Fiction

If you have been around educational technology long enough, either as a practitioner or technology minded teacher you have seen innovation after innovation billed as transformational. We are told that these technologies will change how we teach and learn, when at best these technologies become just another tool in the tech savvy educators' tool-belt and at worst add an unnecessary level of complexity in an environment where getting back to basics often yields the best outcomes for students. This presentation looks at the trend in artificial intelligence and its application in instructional environments. It investigates what applications are useful for teachers, technologists and administrators on a day to day basis, from the clever marketing of IT sales reps.

10:45 - 11:15 AM	**Session B 3**	**Peggy Moore, MS.Ed, Director of E-Learning,** **Room C104**

Peggy Moore, MS.Ed, Director of E-Learning,
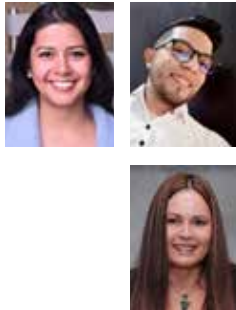 **College of Allied Health, UNMC**
April Elker, MS.Ed, Program Coordinator, E-Learning, UNMC

NEscore: Your Roadmap to E-Module Development

NEscore, an e-learning scorecard is your roadmap to developing a high-quality module and evaluating existing ones. Join this session to examine this evidence-based tool that guides you through all the elements you need to ensure your digital lesson is focused, engaging, and effective.

11:30 - 12:00 PM   **Session C 3**   **Jineth Oviedo, Ph.D. Candidate, Biochemistry Engineering**   **Live/Remote**
  Pontificia Universidad Católica de Valparaíso, Chile

Fabián Otálora, Ph.D. Candidate, Biochemistry Engineering,
  Antonio Narino University, Colombia

Héctor Lunal, Ph.D., Biochemistry Engineer,
  Intelecto Análises Técnicas e Serviços, Brazil

Martonia Gaskill, Ph.D., Associate Professor, Teacher Education,
  University of Nebraska Kearney

Bibliometric Analysis and COVID-19: The State of Research Conducted During the Recent Emergency Remote Learning

Bibliometrics is a unique statistical analysis that can be used to analyze a scalable body of academic literature using quantitative methods. Many scholars have used bibliometric analyses to understand research trends (Ellegaard & Wallin, 2015). Bibliometric statistical analysis can include unique sources such as journals, authors, countries, and institutions to help researchers interested on certain topics to grasp basic information and development status of the literature quickly. This presentation will discuss the state of research conducted and published during the COVID-19 pandemic and the most significant trends emerged at the global level. The techniques and analysis process will be discussed in detail.

12:15 - 01:15 PM   **Session Workshop**   **Brad McLain, PhD, Executive Director,**   **COE Atrium**
  Center for STEM Learning, UC Boulder

Inclusion Goes to Work and School

Join Dr. Brad McLain for this interactive small group session that will apply social science to practical strategies for building more inclusive workplace and schoolplace cultures. This session is intended for change leaders and will include:
  • Research-based methods for systemic change management
  • Self-diagnostic strategic guide questions and focus groups
  • Stories of actual implementation in tech companies and education institutions
Participants should come ready to share and compare experiences, ask tough questions, and collaborate on concrete take-aways they can use back in the workplace.

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MASKS REQUIRED