



Teaching & Assessment
Symposium

Tuesday, March 22, 2022 – University Center, Columbine Suites

9:30-10:45

Research on Climate Change Instruction in Biology

Coffee &
Keynote

Dr. Emily Holt, 2021 Sears Helgoth Teaching Awardee

Climate change instruction is well established and researched in geosciences, yet it is a highly interdisciplinary topic. The countless documented impacts on living things from climate change hints that life sciences fields would exhibit similar devotion to instruction and research. However, education research on climate change instruction in biology classrooms is limited. In her keynote, Dr. Emily Holt will discuss the path her lab at UNC has taken to help describe what biology students are being taught, what they know following this instruction, and how we can better measure and encourage future climate literacy in biology.

11:00-12:15

Student Panel: Experiences with Diversity, Equity, & Inclusion

Student Panel

Facilitated by Dr. Janine Weaver-Douglas, Director, Marcus Garvey Center and Stephen Loveless, Director, Gender & Sexuality Resource Center

Join us to hear from students about their experiences with Diversity, Equity, & Inclusion (DEI) both in and outside of the classroom. Students will share their affirming and difficult experiences related to Diversity, Equity, & Inclusion to help others understand how they may grow in their own inclusive practice. Participants will be encouraged to create an action plan based off of what they hear in order to address inequity in their own classrooms and workspaces.

12:30-1:45

12:35 Signaling Inclusivity in Genetics

Lightning Talk
Session 1

Judy Leatherman, Assoc Professor of Biological Sciences and Victoria Duncan, PhD candidate, Biological Sciences

The teaching of genetics typically includes topics which may make students who hold certain identities feel excluded or stigmatized. We redesigned UNC's genetics course to include representation of different identities such as same-sex families with sperm or egg donors, and transgender/nonbinary individuals. Family pedigree chart notations that distinguished the sperm/egg binary required for reproduction from gender identity were created. The terminology used to describe human genetic variants was also modified; terminology with negative connotations such as "disease", "disorder", "mutant", and "normal", were replaced with more neutral terminology such as "condition", "trait", "variant", "atypical", and "typical". The goals of our redesign were to validate all student identities by representation of those identities, and to create a destigmatizing environment for students who may have overt or hidden disabilities or genetic conditions. The redesigned course was delivered Fall 2021, and student responses to the redesign will be reported.

12:45 Growing [and Assessing] Great Teachers: A Program Level Assessment

Stacy Bailey, PhD, Assistant Professor

In Fall 2019, the English Education (EED) program introduced a fully revised major that offers students three emphasis options: Language and Literature, Special Education, and Culturally and Linguistically Diverse (CLD) Education (with TESL/CLD endorsement). All three options meet the new CDE requirement that teacher education programs explicitly address English Language Learner standards, and the CLD option well exceeds them. Because teacher candidates (TCs) in the CLD option are receiving endorsements in EED and CLD, it is essential that both programs monitor student

performance and development. An e-portfolio will offer a common tool for assessing our shared teacher candidates and measuring the success of this co-curricular program.

Our Portfolio Project would both streamline and standardize assessment of TC's co-curricular learning by creating a single e-portfolio that does more than measure their mastery of program-level outcomes. An e-portfolio allows both UNC faculty and TCs to trace TC's growth and development over the course of their program, provides multiple opportunities for systematic reflection, and warns faculty when intervention might be required.

12:55 Measuring the Effectiveness of Peer-Tutoring and Supplemental Instruction Services at Tutorial Services: A correlation study between student use of peer-tutoring, supplemental instruction assistance and end-of-semester grades

Melissa Hoffner, M.A. and Laurie Claire Landrieu, M.A.

The purpose of this project was to assess the effectiveness of peer-tutoring (first year) and supplemental instruction (SI) academic support services (second year) offered at Tutorial Services (TS) for Academic Years (AY) 2020-2021 and 2021-2022. Specifically, this project focused on the correlation between use of peer-tutoring and SI services by students and their end-of-semester mathematics and science grades. An additional key component of this project was the evaluation of TS student-self reporting satisfaction surveys, and its relation to student academic performance outcomes. Join this lightning talk for a discussion of research findings and implications. Findings indicate that students who utilized Tutorial Services had higher letter grades than those who did not. During this lightning talk we will discuss the research findings and implications for student success.

1:05 Summer Support Initiative for First-Time Students

Dr. Angela Vaughan, Director UNIV 101 and Alexis Hauck, UNIV 101 Lead Instructor

The transition from high school to college is both exciting and challenging for incoming freshmen. These challenges are even more pronounced for historically at-risk populations such as first-generation students, students of color, and students with intersecting identities. In light of the COVID-19 pandemic, students faced new challenges as well as lack of access to the typical resources and events to assist with their transition. In response to these challenges, old and new, a summer support program has been developed that focuses on connecting students to campus resources and fostering a sense of belonging and connection to faculty and peers. Descriptions of the program and survey and focus group results will be shared that highlight the impact of the summer program to students' transition and experiences during their first semester.

1:15 Implementing Principles of Smart Teaching: Assessment of their Effectiveness with Undergraduates in CSD

Dr. Julie Hanks and Dr. Tina Stoodly

In response to the changing face of education and a desire to continue to improve teaching effectiveness to meet the needs of students, specific smart teaching principles were applied in two upper-level undergraduate courses. To evaluate changes in student-perceived skills as learners, survey based data was collected at the beginning and end of each semester across multiple semesters (N = 75+). Student perceptions of themselves as learners changed, and students found the techniques effective and easy to use. Students reported applying strategies learned to other courses. Review of exams and paper grades showed improved performance following implementation of teaching strategies

1:25 *The Serengeti CURE: an Authentic Research Experience in an Online Biology Laboratory*

Ginger R. Fisher

With the pandemic, there was an immediate need to create virtual laboratory courses for students in the introductory biology course. However, creating an online laboratory experience that meets all of the student learning objectives can be quite difficult, especially because the course we offer at UNC is much different than a traditional biology lab experience. In our course, students participate in a Course-Based Undergraduate Research Experience (CURE) and perform authentic research during the semester. However, the current CURE utilizes a live marine organism and therefore would not be feasible in the virtual environment. Therefore, I created an online CURE for BIO 110 students. The primary data source for the students to analyze was camera trap images from the Serengeti that were posted on a citizen science website. Students could use the images to create research questions and answer them based on the data in the images. I also located a variety of virtual lab exercises that would teach them some of the basic biological skills that they would need in the future. Thus, students were able to conduct authentic research in a virtual environment and therefore still meet most of the learning objectives of the course. While I was pleased with the course I was able to put together in such a short period of time, it needed improvement including a new database of images, more scaffolded assignments, and virtual lab exercises that were more effective. In addition, I wanted to assess how the online CURE impacted student's attitudes toward research. At the end of this project, I have been able to make the needed change to the online CURE and it was successfully implemented in the fall 2021 semester. While data analysis is still ongoing, we have found that students attitudes toward research are the same in the online and the on-campus CURE, indicating that students view both research experiences as authentic and that the online CURE may be an effective mechanism to meet the laboratory course objectives.

2:00-3:15
Interactive
Workshop

***How Might We Engage Our Students in Creating Solutions to Complex Issues?
Introduction to Design Thinking***

Dr. Amie Cieminski

This workshop will introduce participants to the design thinking process. Design thinking has been used in all types of organizations to devise creative, user-based solutions to complex problems. As a pedagogy, instructors can use design thinking to move students beyond learning theory since design thinking incorporates informed improvisation, risk-taking, and action as students generate, test, and evaluate possible solutions. Design thinking can be an approach to equity since the process itself focuses on minimizing power structures by expecting participation from different stakeholders, designing with the user in mind, examining the bias of the designers through reflection, and allowing for divergent voices and ideas to emerge (Sellers, 2018).

Participants will engage in the different phases of the design thinking process such as empathize, define, ideate, prototype, and test (d.school, 2010). Through this interactive workshop participants will experience activities that are part of the design thinking process. They will see examples of design thinking units in practice and explore student outcomes. Participants will discuss the benefits and challenges of using design thinking to approach authentic, adaptive challenges within their content and gain resources for incorporating design thinking into their instructional practices.

3:30-4:30

3:30 Problem-Based Learning: What It Looks Like and How to Implement It Effectively

Presentation
Session 1

Kevin Pugh, Professor, Educational Psychology

The overall goal of this presentation is to provide an example of problem-based learning (PBL) and address issues related to effective implementation. PBL is a student-centered instructional model in which students learn content in the context of authentic problem-solving. The model aligns with core learning and motivation

principles and has proven to be effective at fostering deep-level learning outcomes such as the ability to apply learning in real-world situations. During this presentation I will share an effective PBL project, the Calvin Project, which I use to help teacher education students learn about student motivation by trying to solve the motivation problems of Calvin from the Calvin and Hobbes comics. This presentation will discuss development, implementation, and assessment of PBL as well as student perceptions and instructor time commitment.

3:55 One Size Does Not Fit All: A Case Study on How to Teach and Lessons during COVID-19

Dr. Jun Park

This presentation shares a variety of effective teaching approaches and modalities developed during the ongoing COVID-19 pandemic. Student survey questionnaires, collected from 9 sections of Economics courses, reveal how they feel about their learning experience. The analysis of student surveys provides evidence that different types of instructional strategies benefit student learning experience by adopting Flipped classroom, HyFlex, and other teaching/learning software. Specifically, students appreciated a flexible and safe learning environment as well as clear organization, communication, and accessibility inside and outside of classroom. The discussion shares students' feedback for future improvements.

Wednesday, March 23, 2022 – Virtual Sessions

9:00 – 10:30
am

Bearing witness as an Act of Love, Resistance, and Healing

Dr. Mays Imad

Keynote
Address

In this virtual interactive session, we will consider the notion of psychological trauma—why it happens and how it impacts our body and brain. We will examine the connections between stress and trauma and how stress can become traumatic when not managed. We will examine the neuroscience of traumatic stress and its impact on our ability to engage, connect, and learn. We will reflect on the questions of how we will welcome our students and colleagues to our institutions and classrooms this fall and beyond? What can we, educators, possibly do to help attend to their mental health and ameliorate their exhaustion and distress, while at the same time, intentionally engaging in self-care? We will consider the imperative of self-care while caring for others. Last, we will examine the principles, notable misconceptions, and practical examples of trauma-informed care, and reflect on the connections between trauma-informed education, healing, and restorative justice.

10:45 - 11:45
am

10:45 Critical Race Theory: Teacher Beliefs on the Implementation within the Curriculum

Presentation
Session 2

Caterina Belle Azzarello and Ashlee Kemp

Within the past 20 years, more light has been shed on the fact that the American educational system is systematically oppressing those of minority groups and those who are not neurotypical (Mustaffa, 2017; Gillborn, 2015). Critical Race Theory (CRT) is thought to be an in-depth look to the injustices and inequities that are embedded within the American socio-political and economic systems. CRT plays a large role in many students lives, and although it may not affect all of them, the majority of kids

need to know that their teachers are trying to understand those barriers to learning, yet there is limited access and even restrictions surrounding teaching about this topic. The purpose of this qualitative inquiry was to directly ask teachers how they felt about CRT and what their opinions surrounding implementation within the curriculum were. This session will provide an overview of the experimental design, teacher beliefs, and give an opportunity for questions and in-person review of Critical Race Theory.

11:15 *Battling Fake News: Incorporating Media Literacy into Course Content*

Stephanie Evers, Lecturer, University Libraries

Misinformation and disinformation are everywhere, which has led to a conversation about the role K-12 or higher education plays in teaching students about evaluating online information. Though college students are aware of the news landscape and question the credibility of what they read online, are we ensuring that students have the knowledge and skills to determine which sources are trustworthy and those that are not? As with so many skills, some students may be introduced to media literacy in high school, but even if they were, repeated exposure to critically consuming information should only help reinforce the concept of media literacy. If you are like me, you may feel like media literacy does not fit into your course content. You need to cover a lot of material over the course of a semester, and if you are having students do research, you may have them focusing on scholarly sources and determining the credibility of scientific or academic research, not news or online information. As an information literacy educator, I do think it is important to address media literacy specifically and so in my presentation I will share some ideas for incorporating media literacy into a classroom activity or a brief assignment while still addressing issues within your discipline so that students are exposed to media literacy and what it takes to think critically about the information they consume. The presentation will also include what media literacy is, why it is important and how college students are already interacting with misinformation, fake news, real news, and social media.

12:00 - 1:00
pm

Lightning Talk
Session 2

12:05 *The Impact of COVID-19 on College Student Well-Being*

Grace Turner and Rosie Glaser

The COVID-19 pandemic has had a profound impact on college student health and well-being. Students of color (SOC) face disproportionate risks attributed to COVID-19 including psychological, financial, and academic distress. This project sought to understand how the COVID-19 pandemic was particularly detrimental to the well-being of underrepresented student populations. This presentation will discuss research findings and implications.

12:15 *Rowing or Drifting? Re-Assessing Strategies and Sustainable Practices for Retaining Underrepresented Populations at the Monfort College of Business*

Dr. Amaris Vasquez and Hale Daigle

The Student Success Center at Monfort College of Business (MCB) aims to employ a “student-first approach” with a strong focus on equity, inclusion, and business acumen. This vision aims to compliment UNC’s Strategic Enrollment and Student Success (SESS) plan and strategic vision, Rowing, Not Drifting 2030 and intends to implement a funded initiative to improve or enhance student learning for undergraduate students attending courses related to majors/programs in the College of Business and increase our retention rates. Our team conducted program-level assessments utilizing focus groups to explore the successes and challenges for MCB students of underrepresented backgrounds. This presentation will discuss the assessment process, results, and implications for supporting these MCB students.

12:25 Student First Graduate Education: Programmatic Changes in the Program Handbooks and Assessment

Dr. Sue Hyeon Paek

The two vision elements of UNC's Rowing, Not Drifting 2030 are "students first" and "empower inclusivity". Aligning with these two elements of our strategic plan, this project sought to develop and implement programmatic changes across all three graduate programs that will put students first and empower inclusivity within the School of Psychological Sciences. To get rid of an existing institutional barrier, which can leave some students at a disadvantage given their background experience and knowledge, we developed handbooks for all three graduate programs so that our programs are student-ready regardless of their background. Also, we developed the graduate assessment process to be streamlined, which leads to meaningful assessment data necessary to ensure continued student success. Through the iterative process of developing and receiving feedback from stakeholders (i.e., faculty, students), we ensured that the handbooks and assessments are ecologically valid. This issue is prevalent in many graduate programs at UNC. We believe that the development framework, as well as our outcomes, will serve as a useful resource for improving their handbooks and assessment process across campus.

12:35 Assessing Assessment Strategies for Knowledge Visualization- Based Instruction

Dr. Anna Ursyn

This research-based study examines students' perceptions toward various ways used to assess their understanding and knowledge retention in knowledge visualization-based with the use of visuals as their tool, starting with icons, logos, or visual presentation of complex ideas for faster and better communication, allowing to compare and contrast data visually. Students who gain understanding of some techniques, rules and procedures might gain advantage when searching for jobs and become acknowledged

as a visually contributing member of the company they'd work for. Those skills might help students acquiring abstract thinking skills, gain self confidence in visual data presentation, socializing with the rest of the group on the same level as visuals speak out equally, and to make connections between their professions and art.

1:15 - 2:15
pm

1:15 Collaborative assessment in online teaching: A tool for understanding your students

Presentation
Session 3

Dr. Emily Wakefield

In a world radically changed by the pandemic, facilitating effective social interaction within the classroom has become a significant hurdle while remaining a necessity for students. For years research has advocated for collaborative learning within the classroom and studies have outlined the social, psychological, academic, and assessment benefits derived from collaborative learning within the classroom. Many of these benefits are primarily student-centered, but there are also substantial benefits for an instructor. For a new/novice instructor two of the most challenging aspects of teaching is learning to understand the students and their reasoning and being able to accurately assess the students' knowledge and understanding.

This presentation will discuss how collaborative assessment using group quizzes can increase student learning outcomes and increase their own knowledge of their students. Participants will learn the importance of carefully constructing the groups of students, the structure and design of quiz material, and the benefits of utilizing group quizzes to assess the students' understanding and knowledge of the material.

1:45 Understanding Instructor Motivation for Embracing Universal Design for Learning

Alec Zeibarth, Dr. Erin Moser, and Dr. Lyda McCartin

The impact of the abrupt transformation in teaching and learning formats (from school to home, and from in-class to online) as a result of the COVID-19 pandemic has revealed many limitations on the delivery of quality and equitable instruction for students nationwide. One way to ensure equity in course design is through the framework of Universal Design for Learning (UDL), an educational framework that provides guidelines for providing equitable learning experiences for all students. Although the obvious benefits of UDL may be seen in providing equitable opportunities for students with disabilities, UDL benefits all students. In this presentation we discuss the results of a study exploring motivation of instructors to embrace UDL and implications for UNC.

2:30 - 3:30
pm

2:35 Educational Technology Course Improvement for Teacher Preparation Programs at UNC

Lightning Talk
Session 3

WeiHsuan Lo, Erin Wachter, Sarah Alqasem, and Bryan Westman Graduate Teaching Assistants, Technology, Innovation, and Pedagogy Program; Dr. Heng-Yu Ku, Professor, Technology, Innovation, and Pedagogy Program

Educational technology integration is exponentially increasing across curricula (Voithofer & Nelson, 2020). The capacity of technology to improve student learning outcomes depends significantly on how teachers incorporate technology into their practice (Tamim et al., 2011). Teacher education programs must provide teachers with the skills for truly effective technology implementation (Dong & Mertala, 2019). Recent findings show teacher preparation programs need more robust programming (Alelaimat et al., 2021). Hager (2020) predicts it is likely technology used in teacher preparation programs will continue changing as technology rapidly evolves. As these changes develop, future teachers need time for support, processing, and skill application in novel situations (Ferdig et al., 2020). Within technology-rich schools, gaps persist in effectively implementing technology-infused instruction. During this presentation we will discuss the results of a study to determine content needed within pre-service teacher educational technology courses, to evaluate growth in teacher competencies,

and provide recommendations for effective educational technology courses. The results and implications of our study may assist other teacher preparation programs on how to analyze courses offerings, and identify areas of educator growth compared to school district expectations.

2:45 Impacts & Implications of Math Anxiety: Intel from a College Population

Caterina Belle Azzarello

Math anxiety is defined as apprehension and/or anxiety related to thinking about or performing math that interferes with solving math problems and negatively affects math performance (Ashcraft & Kirk, 2001; Richardson & Suinn, 1972). Individuals with high math anxiety experience pain network neural activation when thinking about doing math, suggesting that for highly math anxious students, math can produce feelings like pain (Lyons & Beilock, 2012). Math anxiety is prevalent in students from all contexts but may have effects for those within specific demographic groups, particularly marginalized groups such as historically excluded racial groups, women, and first-generation students. This presentation will discuss the results of a study exploring the relationships between math attitudinal variables, namely math anxiety and math self-efficacy and implications for student learning.

2:55 Freedom Through Restriction: Empowering Students to Access Creative Freedom Through Strategic Use of Limiting Parameters

Denin Slage-Koch

While encouraging students to exercise creativity in the classroom promotes a positive and fun learning environment, students often struggle to break out of prior tendencies, thought patterns and proven methods in the classroom. By imposing temporary parameters and restrictions on the resources and processes a student can use to

approach a task, teachers can empower their students to explore new ideas, exercise abstract thinking and improve their performance in unique ways. This presentation approaches this concept through the lens of teaching jazz improvisation and demonstrates how instructing students to play an improvised solo that adheres to specific and restrictive guidelines can encourage explorations and increase awareness of creative options that might otherwise go unconsidered. A discussion of how this approach might be applied to other academic disciplines follows this demonstration.

3:05-3:25 *LE@RN at UNC - A new Canvas-based learning resources repository*

Rebecca Saunders, Instructional Designer and Kathy Zellers, Director of IDD

Join us for a demonstration of how Instructional Design and Development (IDD) partners with faculty to make creative and engaging learning activities for use in Canvas. We will show the highlights of a process that gets us from learning objective to interactive resource. We will also introduce you to the new LE@RN repository in Canvas.