

NITOP 2020 POSTER SCHEDULE

Friday, January 3, 2020

1:45-3:00 p.m.

1. Fostering Empathy: A Service-Learning Project

Amy Baus, University of Dubuque

This poster session will report on a service-learning project which promotes the fostering of empathy and offers college students the opportunity to gain practical experience by facilitating and participating in character education through the psychology course curriculum. Developing and sustaining a culture of children to become empathic towards others can be complex, the key is to look at the quality of a child's relationships within the climate of their home and within their place of education, such as their school. It is critical to raise home, schools, and community awareness on character formation, particularly for children who may be unable to communicate psychological distress, which can be associated with risk-taking and unhealthy behaviors, such as bullying. Providing intervention and support, starting in the home and the transitions into the school environment can be beneficial towards the development of compassion and empathy. Prosocial responsiveness such as, adults interacting with children about their emotions; assisting children to have more positive relationships with their peers; and offering children the opportunity to see that other people may have a different perspective than their own can increase a child's likelihood to the development of secure attachments, which can help them feel more competent and self-confident.

2. Mindfulness in the Psychology Classroom

Emma Bernardi, The Ohio State University

Ziv Bell, The Ohio State University

Lisa Cravens-Brown, The Ohio State University

Research on mindfulness has increased dramatically in the past decade and indicates mindfulness is associated with improved student learning and mental health. However, many undergraduate students have limited experience with mindfulness. We investigated student perceptions of brief mindfulness practices conducted at the beginning of each class session during an undergraduate Abnormal Psychology course at a large public university. Mindfulness practices included body scans, breath awareness, loving kindness meditations, and others. At the end of the semester, the Mindful Attention Awareness Scale (MAAS), along with open-ended qualitative questions on students' perceptions of mindfulness were administered in an online survey. Students reported moderate levels of dispositional mindfulness ($M = 3.33$, $SD = 0.74$), and 100% of students who responded expressed interest in continuing to practice mindfulness on their own and would recommend instructors to lead mindfulness practices during class. Future directions are discussed, including collecting pre-post data on student perceptions of mindfulness at the beginning and end of the semester, experimentally manipulating mindfulness conditions across courses, and assessing student learning outcomes associated with mindfulness. This study supports the feasibility of implementing brief mindfulness practices in psychology courses and conducting empirical research on mindfulness in the classroom. Additionally, this study suggests mindfulness practices are well-received by students and recommendations for implementing mindfulness in psychology courses are provided.

3. Redesigning Introduction to Psychology: Applying New Frameworks and Assessing Critical Thinking Outcomes

Onna Brewer, Rockford University

Joel Lynch, Rockford University

As teachers of Introduction to Psychology (PSYC 100) at a small, liberal arts university in the Midwest U.S., we have been exploring frameworks for enhancing and assessing methods of teaching PSYC 100 that emphasize critical thinking, scientific reasoning, and deeper understanding of the interconnections among the major domains of psychological science. The 5 Pillars model (Gurung et al., 2016) and the Reinventing Introductory Psychology model supported by the Association for Psychological Science (2019) offer two such frameworks around which we have redesigned PSYC 100 for the Fall 2019 semester. For the past several semesters, we have also administered the Misconceptions Test or "What do you believe?" survey, obtained from APA's Project Assessment, as an anonymous survey of PSYC 100 students at the start and end of each semester. This survey asks students to rate the extent to which they believe 20 statements about human behavior to be true or false on a 4-point scale. Several of these statements correspond directly to topics and assignments included in our redesign of PSYC 100. Assessment of

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course outcomes within- and between-semesters involves statistical evaluation of changes in the percentage of PSYC 100 students who believe false psychological claims that have been explicitly discussed in class as well as other misconceptions on the test that invite reasoning based on broader application of knowledge acquired in the course. This poster will present details about our approach to redesigning introductory psychology, sample course activities and assignments, as well as assessment results.

4. Experimental Investigation of a Class Demonstration's Impact on Student Learning, Engagement, and Enjoyment

Andrew Butler, Valparaiso University

Gina Sylvester, Valparaiso University

Taylor Nesselroad, Valparaiso University

Our aim was to assess student's learning, engagement, and enjoyment as a result of providing them with an interactive McGurk Effect Demo. I presented this demo at last year's NITOP DEMO. There were three main goals for this in-class demonstration. We wanted to help students understand and remember the difference between Sensation and Perception, distinguish between Top-Down and Bottom-Up processing, and experience the multisensory nature of perception. Multiple choice and short answer questions about core Sensation and Perception concepts in Introductory Psychology were given pre and post demonstration. Students were also asked about their subjective experience and evaluation of the demonstration.

Ninety-six students completed the pre and post multiple-choice questions. Performance increased on multiple-choice questions pre-demo ($M = 57\%$, $SD=17\%$) to post-demo ($M = 80\%$, $SD=18\%$) ($t(95) = 10.79$, $p < .001$; $d = 1.10$). This finding supports that the demonstration was effective at increasing student learning. Additionally, the subjective questionnaire showed that on average students agreed the demonstration was clear, engaging, and useful. We will discuss these results along with short answer data and delayed memory performance on future exams post-demo. We hope that sharing our experience in assessing this demo with conference participants will help to expand dialogue and empirical research into the use of class demonstrations. Finally, we will discuss how empirically investigation of this demonstration not only allowed us to test its effectiveness but also lead us to increase the quality of the demonstration itself.

5. The Midterm Wrapper: A Performance Intervention that Works

Christie Cathey, Missouri State University

Charles Hoogland, University of South Florida

Lydia Needy, Missouri State University

The midterm wrapper, modeled after the exam wrapper (Lovett, 2013), is an online assignment that asks Introductory Psychology students to reflect on all components of their midterm grade, including all exams, assignments, and class participation. Students list all earned scores, compare their own past study strategies to a list of effective study strategies, and outline the study-related adjustments they plan to make for the second half of the semester. We piloted the midterm wrapper as an optional assignment in Spring 2018; approximately 52% of students completed it. Students who completed the assignment had better trajectories between midterm and the end of the semester in terms of number of homework assignments completed, exam performance, and final grades. Further, at the end of the semester, students who completed the midterm wrapper had performed nearly one full letter grade higher than those who had not completed the midterm wrapper. Moreover, controlling for grades at midterm, those who completed the midterm wrapper ended the course with significantly more points than those who did not, $r(772) = .23$, $p < .001$. Based on the evidence of the effectiveness of the midterm wrapper, it is now a required assignment for all Introductory Psychology students. Students continue to rate the assignment very positively, saying that it gives them a better sense of what they need to do to improve their performance, it motivates them to work harder, and it makes them feel more confident in their ability to improve their course performance. Moreover, controlling for grades at midterm, those who completed the midterm wrapper ended the course with significantly more points than those who did not, $r(772) = .23$, $p < .001$. Based on the evidence of the effectiveness of the midterm wrapper, it is now a required assignment for all Introductory Psychology students. Students continue to rate the assignment very positively, saying that it gives them a better sense of what they need to do to improve their performance, it motivates them to work harder, and it makes them feel more confident in their ability to improve their course performance.

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6. Psychology of Education: From a Face-to-Face Learning Environment to an Online Learning Course - Lessons Learned.

Miranda D'Amico, Concordia University

Elsa Lo, Concordia University

This proposal will outline the redesign of a compulsory course in Psychology of Education, from a face-to-face learning environment to an online learning course. This course is also a much-sought elective for students outside of the core program as it provides a survey of psychological theories that show students how to become better learners. These topics include, but are not limited to developmental theories, individual differences, testing and evaluation, instructional psychology, theories of learning and cognition, motivation, classroom management and measurement and testing. As instructors and coordinator of the multiple sections of this course for over 30 years, we have ample evidence from student feedback and achievement that our 'traditional' classroom based lectures and activities, were strongly associated with positive learning outcomes. We engaged in the design of an online version of Psychology of Education with some trepidation as online courses continue to show declining student retention rates and concerned that, student engagement and satisfaction are not always positive (Grey & DiLoreto, 2016). We did so, to contribute to the online learning community in our University and to engage in teaching 'next gen' learners who are avid online users in varied ways. The online section of the course received positive feedback and what is evident is the importance of a very well-planned course design (just like face-to-face), with well-organized activities that lead to both social interaction and engagement. This poster presentation will provide examples of lessons learned and describe 'virtual' learning activities critical to feelings of connectedness with the course.

7. Teaching Research Methods to High School and Undergraduate Students Through Video Games

Katherine Daniels, University of Southern Indiana

Faith Crowley, University of Southern Indiana

Lainie Krumenacker, University of Southern Indiana

Crystal Steltenpohl, University of Southern Indiana

One of the most anxiety-provoking set of courses for psychology students is the research methods and statistics sequence (Bos & Schneider, 2009; Papanastasiou & Zembylas, 2008). One way to introduce students to these topics may involve, perhaps surprisingly, video games. Educators have explored using video games in the classroom to teach statistics at the college level, with some success (Stansbury & Munro, 2013), and some have explored teaching other subjects via video games (e.g. history, Watson, Mong, & Harris, 2011; or computer science, Papastergiou, 2009). However, to our knowledge, there has been no large-scale using games to teach research methods presenting a unique opportunity to cover challenging material in a less anxiety-producing way. Our goal is to create such an educational resource: a video game that teaches students about psychological principles and research methods, taking into account a diversity of approaches, contemporary issues, and ethical concerns for a modern audience. We first created a 10-15 minute game demo that introduces 2-3 basic concepts about research and highlights a few possibilities for gameplay. For example, one character may ask the player questions about the nature of reality, the relationship between researchers and their data, and how we can answer research questions. The character could then respond and explain different paradigms in basic terms, and how the player might relate to those paradigms. We are using this demo to help assess whether this tool helps students better engage with these concepts and to continue game development via feedback from instructors and students.

8. Mentoring Undergraduate Women: A Suggested Curriculum

Dorothy Doolittle, Christopher Newport University

Shelia Greenlee, Christopher Newport University

Faculty at universities of all sizes have set up research labs that use undergraduates as research associates. These students can gain valuable skills for graduate school and the work world. However, undergraduates, especially those at smaller universities may not understand or have the necessary skills to prepare for graduate school and careers. A focus on mentoring while providing experience in a research enterprise can provide students, especially first generation and minorities, an opportunity to learn what is required for successful application to graduate school and some of the skills needed to successfully complete a graduate program. To meet this need, we have prepared a curriculum for our undergraduate research assistants.

Our research/mentoring lab meets once per week for 45 minutes, with a formal agenda that details the activities for that day.

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Activities included in the yearlong research mentoring program also involve other offices on campus. Students attend a library instruction course, a resume writing seminar, a workshop on writing a personal statement for graduate school and at least one career and/or graduate school fair. More experienced students often direct others on the ethics training website (CITI), Google survey development, and SPSS data entry. Typical curricular activities include career exploration exercises (e.g., using O*Net), campus conference funding and travel request workshops, IRB submission workshop, conference poster development session, and data collection, coding and analysis sessions. Other important activities developed specifically for this curriculum, Transformative Reflective Research Journaling (TRRJ) and Critically Analyzing, Reading and Evaluating research (CARE), will also be addressed.

9. Analyzing Austen: Creating Connections Across Disciplines

Susan Doughty, Anderson University

Karen Zagrodnik, Anderson University

An important aspect of a Liberal Arts education is developing the ability to understand and apply information in new and unexpected ways. This was a motivating factor in the creation of what my university terms "Connections" courses-upper-level courses that are designed to help students integrate two seemingly disparate disciplines. This premise led to the development and delivery of "Analyzing Austen": a 300-level course that aimed to connect Psychology and English Literature, as we used an assortment of Psychological concepts as a lens through which to explore the works of Jane Austen. Using a co-taught, cross-disciplinary approach, this course challenged students to consider their own psychological development, romantic relationships, family dynamics, and social identity. This course was designed to focus on the ways in which Austen's works illustrate psychological and relational concepts, as well as demonstrating the ways in which having an understanding of one discipline facilitates and enhances one's understanding and appreciation of the other. Designed to be accessible for students from diverse academic backgrounds, this course also aimed to help students develop critical reading, writing, and thinking skills through application and synthesis of diverse material and personal reflection.

10. Creation and Validation of the Academic Beliefs Scale: Predicting Undergraduate Grade Point Average with Mindsets and Behaviors

Carey Dowling, University of Mississippi

Carrie Smith, University of Mississippi

Yue Yin, University of South Florida

Jeff Williams, University of South Florida

People view attributes, including intelligence, through entity and incremental implicit theories (mindsets), whereby they are seen as unchangeable or malleable, respectively (Dweck & Leggett, 1988). Previous research examining implicit theories of intelligence in undergraduate students has found mixed results for implicit theories of intelligence predicting academic achievement (Sisk, Burgoyne, Sun, Butler, & Macnamara, 2018). Therefore, the present studies set out to evaluate whether a new measure, the Academic Beliefs Scale (ABS), effectively evaluates implicit theories of academic success in undergraduate students and advance the literature exploring the relationship between implicit theories and academic achievement in undergraduate students. In study 1, incremental theories as measured by the ABS, but not the Theories of Intelligence Scale (TIS, Dweck, 1999), significantly predicted official GPAs in undergraduates (N = 250), and the relationship between the entity theory of academic success and GPA was mediated by poor study habits and self-handicapping. In studies 2 and 2a, the psychometric properties of the ABS were found to be sufficient. Furthermore, the relationships between the entity and incremental theories of academic success and GPA were mediated by good academic habits and problematic academic behaviors. Thus, we recommend future research evaluating the impact of implicit theories on academic achievement in an undergraduate sample further examine the use of the ABS in addition to, or in place of, the TIS.

11. Follow the Crowd or Follow Your Heart? A Demonstration of Informational Social Influence

Eric Hansen, Mälardalen University

While social influence is typically presented as having both advantages and disadvantages, dramatic examples such as the bystander effect, the Werther effect and doomsday cults typically leave social psychology students with the impression that adapting one's behavior to real or imagined group pressure can have harmful or even deadly consequences. The poster will present a demonstration I use to emphasize the adaptive nature of informational influence. I distribute two versions of a 30-

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item multiple-choice general knowledge questionnaire. Each question has one correct answer and three distractors. The questions represent three difficulty levels as determined by the percentages who answered correctly in a pilot study. One version (given to the control group) contains only the 30-items, whereas the other version (given to the conformity group) also includes the percentage of students in the pilot study who chose each alternative. I tally and present the results which typically show evidence of informational influence since the conformity group tends to choose the alternatives chosen by the majority of the pilot group to a greater extent than the control group does. Further, the results typically show that following the majority leads to slight improvement for easy items, considerable improvement for moderately difficult items, but to worse performance for difficult items. This demonstrates that it pays to follow others only when their information is likely to be superior to one's own. Because it is a two-way mixed design it can also be used to teach hypothesis testing with means in statistics and research methods courses.

12. Joining Forces: Using Graduate Students to Help Address Mental Health Issues in Introductory Psychology Students

Brooke Whisenhunt, Missouri State University

Flora-Jean Forbes, Missouri State University

There is a growing mental health crisis on college campuses, but the resources needed to effectively manage this crisis are lacking. Our psychology department offers a large enrollment general education course in Introductory Psychology in addition to a master's program in clinical psychology. College campuses need to be able to provide more effective mental health screenings for a large number of students, and our graduate students benefit from additional experience in conducting assessments. To combine these two needs, we developed a program to train clinical psychology graduate students to conduct mental health screenings and follow-up interviews in large sections of Introductory Psychology. We conducted in-class screenings of 247 Introductory Psychology students. Of those students, 64% scored in an elevated range on at least one subscale of the Counseling Center Assessment of Psychological Symptoms-62 (CCAPS-62) which supports prior findings about increasing mental health concerns among this population. Approximately one-quarter of students scored in an elevated range on scales measuring depression, generalized anxiety, and hostility. A total of 27% of students had elevated scores on three or more subscales. Among students who obtained at least one elevated score, 40% completed a follow-up interview online via Business Skype conducted by clinical psychology graduate students, leading to a significant number of referrals to the campus counseling center. This pilot study demonstrates the potential for using clinical psychology students to help assist in identifying at-risk students through conducting universal screenings in Introductory Psychology courses.

13. Students' Perception of Statistics Prior to Taking the Class

Herbert Helm, Andrews University

Prior to taking a class in introductory statistics in a behavioral science department, students were given a questionnaire concerning views they had of statistics and the class. No names were put on the questionnaire and they were told "in no way does this affect your grade in the class". The first set of questions had them relate a stats class to other types of classes (e.g.: math, language, logic, etc.). This was followed by questions which included: how much they thought they would use stats in their lives, and where they would use them. Then a series of questions were related to math skills, followed by a series of questions related to studying for the class and what they were willing to do if they began to do poorly in class. Questions were then put into descriptive statistics or some type of graphing and presented to the class at the next class period. The survey was then used as a teaching method. When the instructor thought there were discrepancies between their perceptions and how the class was being taught, or what statistics were about, discussion about what might be a more realistic perception followed. The proposed poster will look at the statistical results of the survey and discuss where students may need a more realistic perception of the class.

14. Factors Affecting Undergraduate Students' Responses to Academic Failures: Beyond the Cognitive

Meredith Henry, Emory University

Misael Romero-Reyes, Emory University

Jennifer Heemstra, Emory University

Benjamin Le, Haverford College

Lisa A. Corwin, University of Colorado-Boulder

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An important objective of science classes, which is often left unexplored, is developing students' ability to successfully navigate scientific obstacles. This vital skill is considered a hallmark of the scientific disposition and is hypothesized to increase students' persistence in STEM. Recently, there has been increased interest in investigating how various non-cognitive factors (e.g. fear of failure, coping behaviors, and mindset) contribute to this ability in undergraduate STEM contexts, including psychology. Formed in fall 2017, FLAMEnet (Failure as a part of Learning: A Mindset Education Network) is a NSF-funded research collaborative that brings together psychologists, STEM instructors, discipline-based education (DBER) researchers, and academic leaders to address this question by creating and disseminating classroom interventions designed to help STEM students adopt more adaptive approaches to challenges and responses to failures. Data collected during the 2018-2019 academic year via self-report pre- and post-course surveys from students suggested that the relationships among these non-cognitive factors and response to failure in post-secondary academic contexts may be nonlinear. Data collection is underway for Fall 2019 in STEM classrooms representing diverse disciplines, student demographics, and institution types. Our assessment plan for this year includes a mid-semester assessment in addition to pre- and post-course surveys. Structural equation modeling will explore relationships among non-cognitive factors to accurately characterize students' approaches to academic challenges and reactions to failures. This poster will present these results and discuss implications for curricula design and instructor mindset.

15. Belonging & Academic Engagement in a Large Introductory Psychology Course

Paula Yust, Duke University

Jingxuan Liu, Duke University

Bridgette Hard, Duke University

Large, lecture-based introductory psychology courses (with 200+ students) are common at many undergraduate institutions. These courses are also often students' first exposure to psychological science and are fundamental in shaping students' decision to pursue future psychology coursework and research experiences. Students' sense of belonging and academic engagement (i.e., passion or "gusto" for the material) in the course might be important for these long-term course outcomes and students' course grades, but have received little empirical attention. Furthermore, the aspects of a large introductory course that might be associated with belonging and academic engagement warrant further investigation. In the present study, we examine how belonging and academic engagement relate to final grade, interest in future coursework and research, as well as the contributions of social (e.g., number of known classmates or new friends) and course (e.g., lecture interest or interactive level) variables to belonging and academic engagement. Participants were 212 students enrolled in an Introductory Psychology course at a large, private research university. Findings suggest that belonging is important for students' course grades, but academic engagement is important for interest in future coursework and research. Student perceptions of lecture (i.e., interest level, interaction level, depth and difficulty) was the key predictor of both belonging and engagement in the classroom. Findings highlight the differential role belonging and academic engagement have for particular course outcomes and the vital importance the structure of the lecture environment can have for belonging and engagement in large courses.

16. Psychology in the Age of Trump

Michael Hulsizer, Webster University

Linda Woolf, Webster University

The media often has referred to President Trump as the Disruptor in Chief. Although there is much that President Trump has done to disrupt the status quo, he is also taken advantage of sweeping changes in our society-much of which has been fueled by technological advances. Students who take courses in psychology are often seeking out a means to understand these changes. For example, countries around the world are experiencing an increase in racism, sexism, and xenophobia including a growth in organized hate groups. Additionally, there has been a rise in authoritarian leaders, political unrest, and general lack of civility. Technological advances have made life easier but increased feelings of alienation. Fortunately, psychology can help students make sense of these changes. For example, students in social psychology courses learn about the power of the mass media, examine the nature of group dynamics, explore research surrounding violence, and investigate the antecedents of stereotyping, prejudice, and discrimination. Political psychology courses can provide students with a better understanding of how the political process has changed since the last election. Abnormal psychology instructors can address myths surrounding mental illness and aggressive behavior. This poster will explore psychology in the age of Trump. We will identify areas that instructors can

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highlight in traditional psychology courses. Most importantly, we will detail steps instructors can take so as not to alienate students. Different classroom activities, assignments, and recommended resources will also be provided.

17. Feeling Alone in Academia: Perceived Social Isolation Among Instructional Faculty

Natalie Kerr, James Madison University
Cara Meixner, James Madison University

The purpose of our study was to determine the prevalence of loneliness among faculty at our university and to examine the relationship among loneliness, sense of belonging, and job satisfaction. We invited all instructional faculty to participate in a survey about their "sense of community and connection at JMU." The survey assessed their loneliness in the workplace, loneliness in their private lives, sense of belonging to the university, and job satisfaction. We found:

- One-third (33.1%) reported sometimes or often feeling alone at the university.
- More than half (51.4%) reported that they sometimes or often lack companionship.
- Nearly one in five (19.1%) do not feel a sense of belonging at the university.
- Men and women did not differ on workplace loneliness ($U = 10017$, $p > .05$) or sense of belonging ($U = 10165.5$, $p > .05$).
- Full- and part-time instructors did not differ on workplace loneliness or sense of belonging (both $ps > .05$), but this may be due to the diverse assortment of part-time instructional faculty classifications. Qualitative responses suggest that adjuncts may struggle with perceived isolation.
- Faculty of color reported greater workplace loneliness than White faculty ($W = 13715$, $p < .001$); there was no difference on the private life loneliness measure.
- Workplace loneliness ($\beta = -.86$, $p < .001$) and sense of belonging ($\beta = .95$, $p < .001$) were significant predictors of job satisfaction.

Our results highlight the need for additional research on perceived social isolation among faculty and its implications for job satisfaction, performance, and retention.

18. Are Freshmen Ready to Use Research-Based Study Strategies?

Maya Khanna, Creighton University
Corey Guenther, Creighton University
Joshua Fairchild, Creighton University

Creighton University students typically receive little instruction on appropriate study strategies during their freshman seminar course, which we call the Ratio Studiorum Program. We felt that our freshmen students could benefit from receiving instruction about study strategies and especially in discussing the cognitive science and education science research that has examined the relative utility of various strategies. Thus, we designed a classroom-based experiment in which we each are teaching two types of RSP sections. In the experimental sections, the curriculum for RSP focuses on reading and discussing the meta-analysis of study strategies from Dunlosky, Rawson, Marsh, Nathan, and Willingham (2013). The control RSP sections are following the standard curriculum in which there is no discussion of research-based study strategies. In addition, we have asked students to indicate which study strategies they use both before and after taking our RSP sections to see if their strategy choices change across the course and if this depends upon whether they discuss research-based study strategies within their RSP section. Preliminary results suggest that students in the experimental sections do, in fact, adopt more of the study strategies that are the most highly recommended by Dunlosky et al (2013). Students are also reporting that their study strategy choices differ before and after the course, especially for students in the experimental sections of the course. Finally, preliminary results suggest that our study-strategy focus during freshmen seminar is related to higher overall GPA, but this depends on the degree to which students are using the recommended study strategies.

19. A Tale of Two Potters: Using Harry to Teach Psychology

Ciara Kidder, Marian University
Melissa Beers, The Ohio State University

J.K Rowling's Harry Potter series are among the best-selling books of all time. The series is a fine example of captivating storytelling, and it is rich with examples of critical concepts in the field of Psychology. As psychologists, we know that learning is more likely when students can integrate new information with prior knowledge, and elaborate on that material (Cerbin, 2018;

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Ambrose & Lovett, 2014). To capitalize on the potential benefits for learning about psychology in this context, our course sharing poster compares and contrasts two approaches to Potter-themed psychology classes: a one-credit first-year seminar class at a large research institution, and a three-credit honors seminar at a small, private applied liberal arts college. We will share sample syllabi, course topics, and activities, along with discussion about incorporating the Wizarding World into other psychology courses.

20. Teaching Career Readiness Online to Psychology Majors

Karen Mottarella, University of Central Florida
Kristin Horan, University of Central Florida

Many psychology majors say they intend to go to graduate school, but 45% or less actually do (Dunn, 2016). The majority of students who earn a bachelor's degree in psychology enter the workforce, and their career readiness becomes very important. This poster shares how we integrated two online career readiness courses (Career Readiness-1 and Career Readiness-2) into an online career readiness "boot camp." We launched this online format in the Fall 2019 semester. The "boot camp" involves lessons and assignments, spread across the two courses, that include an entire simulated job application process (resume, cover letter, mock interview, situational judgment test and in-basket exercises) as well as other exercises such as writing an aspirational resume, goal-setting, and self-evaluation of social media presence. The job application simulation was modeled after a reliable and valid development tool from Industrial Organizational Psychology (assessment centers; Thornton, Rupp & Hoffman, 2014). Students receive feedback on their performance based on the National Association of Colleges and Employers' (NACE) Career Readiness Competencies. Student learning outcome data for the Fall 2019 semester will be presented.

21. Make it Stick! Centering Psych 101 Around the Theme of Habit Learning

Allison O'Leary, Brevard College

One of the major challenges for instructors of Introduction to Psychology is to help students see the everyday relevance of the topics they are learning. One way to do this is to provide students with first-hand experiences that help them understand these topics. In my Psych 101 course, I centered the content around the theme of habit learning to illustrate to students the difficulty of changing behavior, and to highlight several topics traditionally covered in Psych 101. In this semester-long assignment, students embark on a 50-day journey to establish a new habit (or break a bad habit). The choice is theirs - students may choose to stop biting their nails, to meditate for 10 minutes each day, to stop smoking, to limit time on social media, or anything else. Students carry out their habit each day, and write regular journals to chart their progress and relate the experience to what we are learning in class. For example, students apply operant conditioning principles to think about the consequences of completing / not completing their habit each day. Students consider the motivation for completing their habit - are they internally or externally motivated? They also reflect on the role their habit plays in reducing stress and promoting health. At the end of the semester, students give a presentation on their progress and the longevity of their habit change. In addition to the assignment itself, I will discuss examples of my students' experiences and some feedback provided about the assignment.

22. It's Time to Rethink Undergraduate Psychological Statistics in the Age of Data Science

Robert Padgett, Butler University

In the last few years, member institutions of the Consortium for the Advancement of Undergraduate Statistics Education (CAUSE) have been discussing changes that need to be made to undergraduate statistics courses in response to the transformative influences of the emerging field of Data Science (e.g., <https://www.causeweb.org/cause/ecots/ecots18/>). Indeed some faculty have argued that in 5 to 10 years a Data Science course will completely replace the basic undergraduate statistics course in most college curriculums (Jordan, 2016). In our own arguments at eCots 2016, we noted that, at least from a mathematics pedagogical context, Statistics and Data Science are separate enough that such large scale changes to the basic statistics curriculum are unfounded. But as a Psychology professor who has taught undergraduate statistics to Psychology majors for over 20 years, I feel very differently about what we as psychologists need to be teaching in our classrooms. In this presentation I will outline reasons for requiring such changes, including the fact that unlike mathematical statistics, psychological statistics is a content domain (or at least requires content knowledge) as well as the fact the majority of our students will never complete graduate training in psychology so the statistical skills we teach them should be more relevant to the needs of the marketplace. From there I will examine 3 models for changing the methodology curriculum in psychology from

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additions and (by necessity) deletions to current courses to the addition of requirements in computer science and machine learning algorithms.

23. What Should I Do with My Hands? Using Gesture to Facilitate Meaningful Learning

Celeste Pilegard, University of California, San Diego
Logan Fiorella, University of Georgia

What can instructors do with their hands to help their students learn in an expository lecture? This study tested the hypothesis that instructors can use gesture to signal lesson structure, i.e., how the main ideas of a lesson relate to one another. Previous research shows that increasing the salience of a text's structure can facilitate meaningful learning outcomes including inference making. In two lab-based experiments, college students watched video lessons with a compare-and-contrast lesson structure. In each experiment, two types of gestures were varied in a 2x2 factorial design: structural gestures and iconic gestures. Structural gestures indicated the underlying conceptual structure of the lesson. Iconic gestures were surface-level gestures indicating what things look like. There was a significant main effect of structural gestures on inference test performance in both experiments. There was no main effect of iconic gestures on learning in either experiment. Survey responses suggest that the benefit of structural gestures is not explained by social engagement. This study provides promising evidence that instructors can use their hands to help students mentally organize the content of a lesson, thereby facilitating understanding.

24. Teaching Ethics through Role-Play: Comparing Public Health Research Conducted at the Willowbrook State School with the Infamous Tuskegee Study

Maya C. Rose, College of Staten Island and the Graduate Center, CUNY
Jessica E. Brodsky, College of Staten Island and the Graduate Center, CUNY
Elizabeth S. Che, College of Staten Island and the Graduate Center, CUNY
Dvora Zomberg, College of Staten Island and the Graduate Center, CUNY

Introductory Psychology students often learn about the Tuskegee syphilis study in discussions of research ethics, yet fail to grasp that human-rights violations in US medical research were widespread prior to the mid-1970s (Jones, Grady, & Lederer, 2016). We describe a role-play activity, where PSY100 students (N = 203) took on roles of researchers, participant-victims, family members, and whistle-blowers, and drew parallels between unethical research conducted at Tuskegee and at the Willowbrook State School. The College of Staten Island is located on the former Willowbrook site, where hepatitis research was conducted on intellectually disabled children (Krugman, 1986); this provided a "situated" opportunity for students to learn about human subjects abuse and current protections. In pre-/post-tests (Weeks 2 and 14), students reported previous knowledge about the Tuskegee study and the Willowbrook State School and procedures for protecting research participants. At post-test, students described their participation in the role-play and what Tuskegee and Willowbrook had in common. At pre-test, 48% of students reported some prior knowledge of either Tuskegee or Willowbrook, which increased to 93% at post-test. Some students (N = 73) reported that they did not participate in the role-play, allowing us to assess benefits of participation on students' understanding. Open-ended responses mentioned unethical practices, dishonesty, and untreated disease at both research sites, and also indicated common misconceptions. Findings indicate benefits of engaging PSY100 students in role-play to broaden their understanding of changes in societal views about ethical research practices and the need for federal government oversight to ensure the safety of vulnerable individuals.

25. Let's Get Critical: Psychology-Based Critical Thinking Assessment

Nicole Rushing, Campbell University
Katherine Van Allen, Campbell University

Critical thinking (CT) is a multidimensional construct that has received significant attention in higher education for its association with positive academic outcomes. CT skills help us evaluate claims, solve problems, and make better decisions in an increasingly connected and information-rich world; moreover, CT skills can be improved with practice and training. There is growing interest in measuring subject-specific (psychological) CT for its relevance to course and program objectives, as well as for targeted instructional interventions. We examined the Psychological Critical Thinking Exam (PCTE; Lawson, Jordan-Fleming & Bodle, 2015), which is the only free test with published psychometric information that was recommended in the APA's Guidelines for the Undergraduate Psychology Major (2013). The purpose of our study was to evaluate the PCTE's item functioning, reliability,

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and validity among psychology students at a small, private university in the southeast US. Thirty-one senior psychology majors from 2018-2019 and 35 students across two psychology courses at the beginning of Fall 2019 completed the PCTE, and two faculty raters independently scored the 14 short-answer items. The PCTE displayed moderate to high item difficulty. It demonstrated excellent interrater reliability and excellent internal consistency using the split-half method. It demonstrated good construct validity, as evidenced by a significant positive correlation with the Major Field Test in Psychology, number of psychology credits completed, and psychology GPA. Identifying valid and reliable methods of measuring CT in psychology is an important first step in our multi-study investigation of effective interventions to strengthen CT skills.

26. Exploring Student Satisfaction Within a Hybrid Course

Jay Schwarz, Midland College

The purpose of this study was to examine the relationship between student satisfaction and student-instructor interaction within a hybrid course. Method: A quantitative correlational study using the Student Satisfaction Survey and the Student-Instructor Interaction Survey was utilized. The research question sought to determine if there is a correlation between the degree to which students feel connected to their instructor and their reported satisfaction as measured by the Student Satisfaction Survey within a hybrid course. Results: A positive relationship was found between student satisfaction and student-instructor interaction with a statistical significant correlation, $r = 0.753$, $p < 0.001$. The results support the proposition that student-instructor interaction within a hybrid course impacts a student's experience in a positive manner. Conclusion: The results will benefit instructors and educational institutions as they consider the hybrid format as an alternate format.

27. A Psychology and Counseling Global Service-Learning Project in Cuba

Vicki Sheaffer, LeTourneau University

"Global service learning is a community-driven service experiment that employs structured, critically reflective practice to better understand common human dignity; self; culture; positionality; socio-economic, political, and environmental issues; power relations; and social responsibility, all in global contexts" (Hartman, Kiely, Friedrichs, & Boettcher, 2015). For two years, LeTourneau University Faculty and students (undergraduate and graduate) have been involved in a GSL project in Cuba. After participation in the trip (2018 and/or 2019), students completed a modified version of the survey developed by Niehaus (2012) which contained questions about the student, about prior GSL experience, and about the current GSL experience. The survey contained both Likert scale questions and open-ended questions which allowed the collection of quantitative and qualitative data. Students were unanimous in recommending that future students should participate in a GSL trip, that the GSL trip helped them to see real-world applications of their major, the ability to connect the GSL trip to their academic coursework, and giving them a global awareness and empathy for different cultural perspectives and experiences. GSL trips provide hands-on opportunities for students to learn how to serve the underserved so they become globally minded leaders, at the same time, GSL trips can provide faculty with opportunities to engage in research and scholarship that ultimately serves the world. The poster will also provide tips on planning a GSL trip, how to integrate the trip into curricular or co-curricular programs, how to recruit students, logistics, funding, and activities before, during, and after the GSL trip.

28. Star Power: Qualitative Look at Student Responses to Experiential Exercise on Power and Privilege in a Capitalist Economy

Sepideh Soheilian, University of Baltimore

Katharine Shaffer, University of Baltimore

Kristen Eyssell, University of Baltimore

Sally Farley, University of Baltimore

Authors facilitated an educational game called Star Power, mimicking three tiers of a capitalist economy that ultimately result in the group with the highest SES ("squares"), creating the rules of the game. The game was facilitated for three undergraduate classes (N = 46), and after the game, students self-reported perceptions of the "squares" (highest SES), "circles" (Middle SES), and "triangles" (lowest SES). Qualitative data were collected and analyzed by our research team utilizing the CQR-M method (Consensual Qualitative Research - Modified). Mutually exclusive categories were created based on students' responses. The most common response by students when asked what they thought about the squares was coded under the Strategic/Positive category (they used positive strategies). An example from the data is "really knew the game well." The most common response

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when asked about the circles was coded under the Tried to be a Square category (meaning that most students tried to shift to a higher class). An example response from the data is "wannabes." The most common response when asked about the triangles was coded under the Low class/Poor category, with a sample response of "dregs of society." Implications for experiential learning in the classroom, multicultural education, social dominance theory and research will be discussed.

29. A 4-Hour, Self-Administered, Professional Development Course on NHST in the 21st Century.

Chris Spatz, Hendrix College

This presentation consists of a 36 in. x 48 in. display poster and an accompanying handout. The poster describes and promotes the handout. The handout lists references for a self-study course on the controversy regarding null hypothesis significance testing (NHST). Studying the referenced material should take about four hours. The goal of the course is for the reader to: Understand the controversy about NHST procedures, be able to articulate some of the complaints about NHST, know the data-analysis policies of some journals, and identify alternative approaches for analyzing two-group comparisons. The handout includes an opening paragraph which establishes the context of the course that follows. The course consists of references to articles and editorials that address the use of NHST, each with an introductory annotation. In addition to the handout at NITOP, the course will be available at exploringstatistics.com as Free Material.

30. The Post-Traumatic Growth Experience

Natalie Weaver, Widener University

Alexia Stipa, Widener University

Kathryn Healey, Widener University

Christie Birchall, Widener University

Sunni Tarver, Widener University

Brianna Burgose-Emmolo, Widener University

Jayne Thompson, Widener University

Research has shown that incarcerated individuals benefit from educational opportunities as exemplified by their significantly lower recidivism rates. Experiencing diverse and inclusive education can create a greater sense of self-esteem as well as successful re-entry into the community. Students, faculty, and administration at Widener University are currently implementing a psycho-educational curriculum on trauma, Post-traumatic growth (PTG), PTSD, and bridging to the soul-wounds exemplified in more recent research on Moral Injury. Moral Injury is defined as the injury on one's conscience when they have been involved in an event that goes against their moral code. Recent psychological research is examining PTG for a wide range of primarily health focus concerns. To date there is little to no focus on currently incarcerated individuals who often have a myriad of traumas. Our project is providing undergraduate psychology and criminal justice students with opportunities to develop and implement this psycho educational curriculum. Our curriculum was first piloted as a semester long course on understanding stress (as part of Inside-Out Prison Exchange Program founded at Temple University). We learned that incarcerated individuals often struggle with historical and current traumatic life experiences. The class requested that we continue to work with them to jointly develop a course focused on healing soul-wounds. This semester will also include guest lectures from PSY and CJ faculty. At the conference, our team will present a poster that will demonstrate what we implement in Chester Prison (State Correctional Institution) regarding Moral Injury and PTG. Our poster includes a 3-part framework with an education, activity, and discussion component. Common topics include forgiveness, restorative justice, trauma exploration, and post-traumatic growth.

31. Comparison of ACE's Scores Related to Enhancing Academic Resiliency and Assignment Completion

Jill Sudak-Allison, Grand View University

Kristine Owens, Grand View University

Debra Johnson, Grand View University

Students who have experienced multiple traumas prior to attending college may require additional academic support and faculty interventions in order to complete assignments in a timely manner. The purpose of this study was to compare high and low (Adverse Childhood Experiences) ACE scores, resiliency factors, and assignment completion. Establishing safe and supportive environments helped to prevent and mitigate academic learned helplessness as well as enhanced faculty and student relationships.

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32. Pick a Card, Any Card: Teaching Hypothesis Testing with a Rigged Deck

Jennifer Talarico, Lafayette College

A quick and low cost, yet memorable way to introduce probability, hypothesis testing, confidence, and errors of inferential evaluation is with a simple card trick using a rigged deck (Stephen, 1994). Students articulate the null hypothesis (i.e., a fair deck) and the expected results (e.g., half red and half black cards). Discussion of sampling with replacement and assumptions of randomness can be incorporated into the description of the method. Drawing individual cards and noting the observed results allows for discussion of the quantity of evidence required to warrant skepticism (e.g., not after 2 or even 4 cards, but maybe after 6 cards do they begin to suspect the deck is rigged) and of how much confidence they have in that evaluation (e.g., acknowledging that the empirical findings could be a rare result from a fair deck). Even after all 10 red cards have been drawn and the null is rejected, emphasis is still placed on probabilistic nature of that conclusion. Further discussion of NHST and/or Bayesian models of inference can be built on this concrete example and it can be used as a touchstone for discussions of Type I and Type II errors and other features of scientific reasoning. The simplest version requires only one deck and one student volunteer, but the demo could be adapted as a small group task if each group was provided with their own deck. Similarly, it can be tailored to emphasize concepts of importance to introductory psychology, statistics, or research methods courses.

33. Online Learning Least Preferred Teaching Modality: Again! Some Possible Reasons

Michael Van Slyck, Ph.D., Keiser University

Anthony O'Neil, Keiser University

Erica Ross, Keiser University

Ashley Barrett, Keiser University

Jonathan Ramos, Keiser University

The studies discussed here are part of a larger program of research with the goal of elucidating preferred instructional modalities of undergraduate students. Previous research addressed this topic by offering students a set of instructional modalities and asking for their preference for each. It was hypothesized that "straight" lecture would be least preferred. However, although lecture was generally preferred less than the other modalities, the interesting finding was that online learning was in fact the least preferred instructional modality. In six data collection efforts with an $n > 150$, online learning was always least preferred, and in 5 of the 6 data collection efforts online learning was significantly less preferred than all other modalities. However, there were several flaws in these studies which limited the knowledge gained from the results. No distinction was made between those who had/had not taken an online course. Second no information was collected elucidating the reasons for these ratings. Two studies ($n = 60$) reported here were designed to address these issues. Participants were asked if they had taken an online course and their reactions to online learning. The preference results confirmed the earlier research. Online learning was significantly less preferred than all other modalities. In addition, it was determined that most of the respondents had taken an online course. Finally, an initial qualitative analysis of the open-ended question indicated a decided dislike for online learning and a strong preference for the on ground/in class modality. The reasons for this dislike will be discussed.

34. Practice Makes Perfect: Teaching Therapy Skills Using Applied Practice

Jessica Waesche, University of Central Florida

Many psychology undergraduate students are eager to learn about the practice of psychotherapy. However, ethical and logistical constraints prevent most students from obtaining hands-on practice in psychotherapy. In an effort to engage students and provide them the opportunity to practice their therapy skills, I have developed a series of applied assignments for a Behavior Therapy class. Over the course of the semester, students worked on making a personal behavioral change, utilizing behavioral therapy techniques discussed in class. Additionally, students were given written case examples of clients and responded with written descriptions of the therapy techniques that they would use to treat these clients. In addition to discussing the details of these assignments, I will present both quantitative and qualitative survey data reflecting high levels of student satisfaction from these assignments.

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35. Cohorting, Academic Performance, and On-Time Completion of Required Classes

Dana Wood, University of Florida

Kristina Dandy, Georgia College & State University

Noland White, Georgia College & State University

Student cohorts-groups of students who progress through a program of study together-are utilized in higher education as a way to build community and facilitate learning. In 2014, our department began organizing psychology majors into cohorts as they completed an introductory mathematics statistics class (MATH2600), which is a prerequisite for entry into the department's statistics (PSYC2700) and research methods (PSYC2800) sequence. In research presented at NITOP 2019, we reported that cohorted students did not appear to have greater statistical knowledge than non-cohorted students after taking MATH2600. Here, we continue this line of investigation by examining whether cohorted and non-cohorted students differed on other important educational outcomes, including grades in PSYC2700/PSYC2800 and on-time completion of these courses, which are prerequisites for upper-level psychology classes. Linear regression analyses revealed that, although there was no difference with respect to grades in PSYC2700, cohorted students earned significantly higher grades in PSYC2800 ($b = 0.24$, $SE\ b = 0.08$, $p = .002$). Moreover, logistic regression analyses showed that cohorted students were significantly more likely to complete PSYC2700 on time (during the semester immediately following completion of MATH2600; $b = 1.89$, $SE\ b = 0.38$, $p < .001$). They were also more likely to complete PSYC2800 on time (during the semester immediately following PSYC2700) at a level that approached significance ($b = 0.51$, $SE\ b = 0.29$, $p = .073$). High school GPA was controlled in all models. Implications and suggestions for future work on the use of cohorts in higher education will be discussed.

36. Using Language to Measure Student Beliefs About Intelligence

Brenda Yang, Duke University

Christina Bejjani, Duke University

Taylor Albus, Duke University

Thomas O'Connor, Duke University

Bridgette Martin Hard, Duke University

Believing that intelligence as a trait can be grown and developed ("growth mindset") has powerful impacts on academic success, increasing motivation, learning goals, and self-esteem for younger and college-aged students as well as underrepresented minorities. While much recent research oriented around mindsets has been focused on growth mindset interventions within K-12 institutions, fewer have investigated how to promote growth mindsets in higher education settings. Still fewer projects have investigated how to naturalistically measure students' beliefs about intelligence. Here, we analyze responses to open-ended writing prompts to probe student mindsets as part of a pedagogical exercise within an Introduction to Psychology college classroom. For example, one student who wrote, "They are successful and know about a lot of things, learning seems to come easy to them" when asked to describe someone they thought of as intelligent; this was coded as having a "fixed" mindset. We find that such natural language samples are predictive of intelligence mindsets as measured by the validated Theory of Intelligence (TOI) scale. Measuring intelligence beliefs with naturalistic writing samples are one potential way of identifying so-called "false growth mindsets," which include instances in which students may explicitly endorse but behave inconsistently with growth mindset beliefs. Our project will present: (1) a pedagogical exercise utilizing student responses to teach intelligence beliefs in classrooms, (2) correlational analyses predicting student achievement and well-being using multiple measures of intelligence mindset, and (3) an interactive web application developed to parse open-ended text responses to display words indicative of fixed and growth mindsets.

Saturday, January 4, 2020

4:45-6:00 p.m.

37. Optimizing Resources: Using What you Have to Improve your Curriculum

Aileen Bailey, St. Mary's College of Maryland

Gina Fernandez, St. Mary's College of Maryland

James Mantell, St. Mary's College of Maryland

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Departments create curricular frameworks to best prepare students for their future. They are routinely asked by internal and external bodies to evaluate their effectiveness, and this can lead to curricular change or reform. Effective curricular change can be smaller, for example at the course level, or within the larger curricular framework. However, change is challenging, especially in circumstances in which additional resources are either limited or absent. Facing this issue, we utilized our known programmatic values of student credit hours, typical course offerings, and faculty teaching units and release time to quantitatively optimize our resources. This quantitative approach allowed our department to scaffold skills throughout the curriculum, redesign courses, and add a new course designed to further develop analytical writing. In terms of faculty work load, we also improved the way our faculty are compensated for mentoring undergraduate and senior capstone research experiences. In addition, this quantitative approach allowed for a redistribution of resources to best fit our department's pedagogical values, opened the door to new creative course design, and afforded the development of courses that can meaningfully connect to our institution's new general education curriculum. Our approach enabled us to move forward with curricular design without the need for additional resources. Our poster will be aimed at explaining our process such that other institutions may benefit from this approach. We thank the Council on Undergraduate Research Transformations Project (NSF DUE #1625354) for initiating our desire for curricular reform.

38. Using Content Acquisition Podcasts to Teach Intro Psych Students about the Argumentative Structure of Scientific Abstracts and Develop their Paraphrasing Skills

Jessica E. Brodsky, College of Staten Island and the Graduate Center, CUNY

Elizabeth S. Che, College of Staten Island and the Graduate Center, CUNY

Arshia K. Lodhi, College of Staten Island and the Graduate Center, CUNY

Patricia J. Brooks, College of Staten Island and the Graduate Center, CUNY

Unlike scientific textbooks, empirical journal articles have an argumentative structure, which may be challenging for undergraduates to grasp (Larson et al., 2004; Suppe, 1998). Scientific abstracts typically contain five key pieces of information that summarize the argument of the article: rationale, research question, conclusions, supporting results, and consequences. As such, abstracts may be an effective tool for developing students' understanding of argumentative texts. We created content acquisition podcasts (narrated slideshows or CAPs; Kennedy et al., 2016) embedded in online homework aimed at teaching Intro Psych students (N = 126) the argumentative structure of abstracts and how to summarize information in their own words. The CAPs explained how to locate articles using Google Scholar, identify the five argument components, use Wikipedia to unpack jargon, and paraphrase information without plagiarizing, using abstracts linked to course topics. We used a computational approach to assess paraphrasing skills by computing the amount of word-level overlap between each original abstract and student summaries. For our analyses, we used the CLAN programs, accessed via the CHILDES project (MacWhinney, 2000). Compared to commercial plagiarism-checkers such as SafeAssign and TurnItIn, CLAN programs provided the most transparency in how plagiarism was detected. Over three assignments (five abstracts total), students showed gains in their ability to extract the five argument components contained within each abstract. They also improved in their ability to rephrase information, as indicated by decreased word-level overlap scores. These findings suggest that online homework assignments offer a viable approach to scaffolding students' introduction to discipline-specific reading and writing skills.

39. Teaching of Heading Structure to Augment Highlighting Strategy

Hung-Tao Chen, Eastern Kentucky University

Highlighting is one of the most popular studying strategies with 53% of college students indicating that they use highlighting as a studying strategy (Miyatsu, Nguyen & McDaniel, 2018). Some researchers have discounted highlighting as a useful studying strategy, because existing research provides little evidence of any performance increase (Dunlosky, Rawson, Marsh, Nathan & Willingham, 2013). One of the problems with highlighting was likely due to the fact that many students were unfamiliar with the context or the structure of the assigned reading. The current study investigated the usefulness of highlighting strategy in the context of reading a psychology research article with APA-style formatting. The functional headings included in APA-style research papers could serve as useful reading and navigation tools (Lemarié, Lorch, Eyrolle & Virbel, 2008). Participants were randomly assigned to one of four conditions, with increasing level of functional heading instructions. Results from the current study indicated that participants were better at identifying and highlighting the most important information after they were taught the purpose of various functional headings relevant to the APA-style research paper. Participants also reported an

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increased likeliness of utilizing headings after being taught about functional headings. Recall and knowledge transfer performance were higher for participants who received functional heading instructions. Findings from the current study indicated that highlighting could potentially be an effective strategy when readers were provided with adequate text structural information.

40. Collaborative Testing: Performance, Attitudes and Ordering Effect

Victoria Cross, University of California, Davis

Learning in most university classes is assessed by individual effort on summative exams. Collaborative testing includes an opportunity for students to collaborate with each other in small groups on a portion of an exam. Generally, the format of collaborative exams includes the students submitting an individual portion of an exam followed by an opportunity to collaborate with peers on a subset of questions or scenarios (new or repeated) and submitting a second answer sheet. In this way, the students demonstrate what they are able to achieve on their own and then, rather than leaving the exam frustrated or unsure, they are given an immediate opportunity to discuss the concepts with peers and to capitalize on their motivation to maximize their understanding and their grade. In this study, I implemented collaborative exams in a lower-division data visualization course. I explored the impact of the order of the individual and collaborative portions of the exam on both academic performance and on student attitude to the testing process. For some of the exams in some of the sections of this course, the individual exam was presented first and followed by the opportunity to collaborate. In the remaining sections and exams, the collaborative exam was presented first and followed by the individual exam.

41. Investigating the Impact of Self-Generated vs. Generic Datasets on Student Learning in Research Methods and Statistics

Brian Day, Butler University

Fabiana Alceste, Butler University

Research methods and statistics (RMS) courses are a vital part of any psychology program. As empirical scientists, designing methodologically sound studies and being able to appropriately analyze the resulting data are our most important jobs. In teaching these topics, instructors often rely on generic datasets provided with the textbook. The current work focuses on the impact and effectiveness of having RMS classes produce their own datasets to be used and analyzed throughout the semester. Two sections of the same class, RMS II at Butler University, participated in this study. In one class, students completed a variety of surveys and assessments at the beginning of the semester designed to supply the instructor with a large dataset to be used while teaching statistics like z-tests, t-tests, and F-tests. In the other class, the instructor relied on generic datasets and examples provided by the textbook. To determine the effectiveness of relying on self-produced vs. generic datasets, students in both classes took an identical pretest and will take identical posttests to assess learning and retention over the semester. Other measures will also be collected, such as having students self-report the extent to which they can see connections between RMS, and their own lives. predict that students in the self-generated data class will report higher applicability and enjoyment of exercises and topics discussed in RMS II, and will score higher on an RMS posttest than students who learn about statistics using unrelated datasets.

42. Assessing the Benefits of Undergraduate Research Experiences

Robert Franklin, Anderson University

Susan Doughty, Anderson University

Patty Slaughter, Anderson University

Undergraduate participation in research, including working as research assistants and conducting independent research projects, is a widespread experience for advanced psychology students. Several surveys of instructors advocate the benefits of these experiences, but it is less clear whether research experience has a measurable benefit for the students themselves. In this study, we examined three years of psychology graduates at a small liberal arts school, comparing majors who had research experiences versus those who did not, on the psychology Area Concentration Achievement Test, (ACAT, PACAT Inc). Students who completed a research experience had significantly higher gains on the statistics and experimental methods subtest of a standardized psychology exam, when compared to students who did not complete a research experience. We also report results from a qualitative survey of recent graduates on how research experiences have helped them in graduate school and current employment. When comparing scores at graduation to a pre-test given in the beginning of the major, we found

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significant gains for statistics but not methods. These findings show quantifiable evidence of the value of research experience in the undergraduate curriculum and explore the challenges of assessing these impacts of research experience.

43. Assessing Psychology Students' Content Retention Using Pre/Post Exams

Krista Fritson, University of Nebraska at Kearney

Andrew Fritson, University of Nebraska at Kearney

Academics are consistently searching for ways to assess student learning outcomes. Pedagogical research recognizes indirect and direct, as well as summative and formative strategies to measure learning outcomes. These strategies can assist in assessing teaching styles, content-learning in courses, and program-wide learning outcomes. The purpose of this study is to measure student learning outcomes of course content in psychology classes using a direct, summative strategy. Specifically, students' learning of course content is measured by analyzing the changes in students' exam scores using "comprehensive" pre-course exams and post-course exams. Students in four undergraduate psychology courses across four semesters completed a "comprehensive" exam comprised of 50 randomly selected questions from the 4 major exams in the course, then students completed the same "comprehensive" exam at the end of their course after all course content lectures were completed. Results showed retention of course content was variable for different courses. Implications regarding the use of pre/post course "comprehensive" exams are discussed.

44. Student-Friendly Teaching: Does a Change in Topic Order Improve Student Success in Introductory Psychology?

Julie Grignon, Anne Arundel Community College

Jarred Jenkins, Anne Arundel Community College

To our knowledge, few researchers have examined the influence of topic order on student success in introductory psychology courses. It is likely that most teachers follow the standard order seen in most textbooks. Aimed at increasing student success, we've altered the order of topic presentation by including more student-friendly, accessible topics (e.g., memory, social psychology) at the front end of the course, and delaying exposure to the tougher, more abstract topics (e.g., research methods, biopsychology) until later. Throughout the semester, we examined assessment data, withdrawals, and course success outcomes to determine the impact of topic order in our classes. In addition, we gathered narrative feedback from instructors to examine the effect on lesson plans and student engagement. In particular, we were interested in faculty perceptions regarding the impact of the order change on students.

45. The State of Psychological Statistics

Jessica Hartnett, Gannon University

Janet Peters, Washington State University - Tri-Cities

How are faculty at different universities throughout the world teaching psychology majors about statistics? This poster will answer this question, using descriptive survey data collected during the Fall 2019 semester to better understand software, content, and assignments used to teach psychology majors Introduction to Statistics.

46. Just Study More? Targeting Single-Factor Thinking and Increasing Student Achievement

Joe Hatcher, Ripon College

Single-factor thinking is recognized as an impediment to good critical thinking (Kuhn, 1991). This exercise uses the example of an Intro Psych exam and asks students to come up with factors that contribute to some students doing better than others. They readily come up with multiple factors, including studying time, adequate sleep, etc. Assuming that there are at least 33 factors, the Components of Variance model is then introduced, and it is noted that, with 33 factors, the average factor will account for about 3% of the variance. A student who obtains a 50% on the midterm and only studies more, should thus expect about a 53% on the next exam, which fits the findings of Gurung (2015), who found that studying time accounted for about 2.5% of the variance. Two strategies are then introduced. The Change-5 strategy suggests that changing five variables is necessary for a substantial change in outcome. The second strategy introduces the concept of interactions, and suggests that some factors such as one's interest in the topic may impact other factors, such as note-taking, etc., thus suggesting the strategy of changing one factor, like motivation, that affects at least five other factors. Students report that the example is easily understandable

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and often impacts their educational strategies. Extensions to other real-world outcomes such as crime, poverty, or one's quality of life are also employed. References: Kuhn, D. (1991). *The skills of argument*. Cambridge UK: Cambridge University Press. Gurung, R.A. (2015) How do students study? (And does it really matter?) *Teaching of Psychology*, 32(4),238-240.

47. Significant but Meaningless Differences in Student Grades when Using E-Texts

Jeffrey Henriques, University of Wisconsin-Madison

As instructors look for ways to lower costs for students, one solution has been to adopt e-texts in lieu of traditional paper textbooks. While the costs of these e-texts are significantly less, some wonder if student learning suffers as a result of the change in format. Two sections of students enrolled in introductory psychology using e-texts, $n = 363$ and $n = 372$ respectively, were compared to students who had been enrolled in those sections the previous year using a traditional textbook, $n = 383$ and $n = 344$ respectively. The same exams were administered both years, although the exams were different for each section. Average test grades were compared across the two years using a one-way analysis of covariance, with course section serving as a covariate. Students in the e-text classes performed worse relative to students who had used a traditional textbook. This difference, while statistically significant, is too small to be of any practical importance. A secondary analysis examined students' ratings, using a 1-5 rating scale, of the extent to which the textbook helped their learning in the class. In this comparison, the traditional textbook was rated more helpful compared to the e-text. Instructors and students can be reassured that while students may find e-texts to be less helpful the impact on learning is negligible.

48. They Didn't Just Write What I Think They Did, Did They?

Martha Hubertz, University of Central Florida

One of the challenges of teaching large classes is how to afford students opportunities for writing in the discipline while balancing the work of grading. In keeping with the growing scholarship of teaching and learning (SOTL), I collaborated with the universities Writing Across the Curriculum (WAC) fellows over the past two years to reconceptualize some of my writing assignments to be both more innovative in my teaching and scaffold writing in APA format. The goal was to apply WAC principals to create interesting assignments that also incorporated scientific writing. As well as discuss how innovative assignments offer a perhaps more exciting alternative for today's multi-media savvy student. In "They Didn't Just Write What I Think They Did, Did They?", I hope to share the efficacy of utilizing WAC principals in teaching APA format. The goal here is to start a conversation about both writing and learning APA format in large classes. As well as discuss the efficacy of writing in meeting course learning objectives. Data from student feedback as well as comments made by students on views of the redesigned assignments will be presented.

49. Developing a Psychology Peer Advising Program: Practical Advice and One Year Outcomes

Alicia Ibaraki, Western Oregon University

Lauren Roscoe, Western Oregon University

Academic advising is an important tool for helping students progress through an academic degree. For almost forty years, it has been recognized as a major factor that promotes student satisfaction and retention (Beal & Noel, 1980). Advising can be categorized as prescriptive or developmental. Prescriptive advising is task oriented. Course selection, the explanation of degree requirements, and registration procedures are common prescriptive advising activities. Conversely, developmental advising emphasizes the advisor-advisee relationship. Common developmental advising strategies include discussing advisee values and how that ties to career choice, assisting with interpersonal problems, and helping to develop interpersonal skills (Mottarella et al., 2004). In many instances, developmental advising is more time intensive than prescriptive advising, which can be a challenge for faculty with heavy advising loads. One solution is Peer Advising, the provision of academic advising to students by other students who have received appropriate training. This poster outlines the steps taken to develop a psychology peer advising program at a regional comprehensive university including costs, recommended infrastructure, and helpful tips. Cross-sectional data about student experiences with developmental and prescriptive advising from before and after the establishment of a peer advising program is presented, as well as student perspectives about their experiences working with a peer advisor.

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50. Assessing the Effectiveness of a Senior Seminar Designed to Enhance Self-Efficacy and Career Discernment in Psychology Undergraduates

Mona Ibrahim, Concordia College

Kiara Timmerman, Concordia College-student

College seniors often feel unsure and unprepared for life after graduation. To help psychology seniors discern their future interests and develop confidence in their skills, a Career module, a Current Literature module, as well as a Research module were incorporated into a required senior seminar course. The Career module involved having students research potential careers and fields of graduate study in psychology and identify the top three that best fit themselves. Subsequently, personnel from the college's career center worked with each student on preparing and polishing a vita or resume and an application cover letter, and on completing a mock interview. The Current Literature module involved reviewing the essential theories and concepts within each area of psychological science and then having students find and discuss together some of the current issues and hot topics within that area. The Research module involved having students individually propose research studies, collect and analyze data to help answer their research questions, present their findings, and write reports on their research in APA style. To assess the effectiveness of these modules, students completed pre-post surveys at the beginning and at the end of the course. The surveys included Leong and Zachar's 1991 Scientist-Practitioner Inventory and Harbke's 2007 Self Efficacy for Scientific Writing Scale, in addition to a rating scale of knowledge of the various areas in psychology, and a rating scale of confidence in career skills. This poster presents the findings from analyses of the pre-post data. Implications for teaching psychology seniors are discussed.

51. Multiple-Choice Tests: Is Necessary Evil Still Evil?

Yelena Kosheleva, McMurry University

The present study further addresses whether multiple-choice tests are a friend or a foe. Facing a challenge of teaching undergraduate courses with large student audiences, educators often use multiple-choice testing as a preferred form of student learning assessment. However, there is a concern that by working with multiple-choice test items students can be learning false facts or internalizing faulty reasoning (e.g., Marsh, Roediger, Bjork, & Bjork, 2007) due to misinformation in the distractors. The present study examines error patterns found in student answers in three multiple-choice tests in an undergraduate Research Methods course. Ten concepts from basic research methodology were used to construct three assessments: homework quiz, exam practice quiz, and real exam. Item analysis of the test results was used to identify each question's difficulty index. In each subsequent test, some distractors were recycled and some were new. Error pattern analysis indicated an interaction between distractor type and question difficulty. Previously seen distractors were selected more often than new distractors in difficult questions but not in easy questions. These preliminary results suggest that misinformation is more damaging to the memory of previously learned material if this material is more complex. Teachers when selecting testing options can consider this finding. To prevent learning false facts, it may be useful to avoid multiple-choice tests with more complex material. However, there is no evidence suggesting that multiple-choice tests alter memory for more basic information. Hence, for initial stages of learning, multiple-choice tests can be a useful form of frequent assessment.

52. Death and Dying Course: Course in Dying? Or Living?

Gloria Lawrence, Wayne State College

In the current study, several writing projects were assigned to determine whether students were influenced to plan their own deaths. Students were assigned to write their own obituary as if they "died next month." They were also assigned to write their obituary and complete their death certificate as if they were 75. In addition, they were encouraged, during a mortuary tour, to pick out their casket and/or urn. They were then asked their opinions regarding the writing assignments and the tour. Most stated the first obituary (dying in 1 month) was fairly easy, but the second obituary (dying at 75) was difficult. It forced them to think about their life, and what they wanted in their life. One student stated "I kept tearing up my age 75 obituary and rewriting it. It dawned on me that I want more out of life. I need to change my major." Another person stated, "this class opened my eyes to another side of life. Talking about advanced directions, how to help the grieving, and writing my obituary I think can help me in the real world and not just for this class. I will actually use this in the real world." Almost every student remarked that "everyone should go through a mortuary before you or your family needs it." "It was interesting and

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'nonthreatening' to see all the different caskets, urns, and vaults." It was concluded that studying death is also a lesson in studying life.

53. Universal Design Principles as Applied to an Online Psychology of Education Course

Elsa Lo, Concordia University

Miranda D'Amico, Concordia University

The implementation of Universal Design for Learning (UDL) principles in post-secondary education has received much attention in the past two decades, primarily as an approach to support the learning of students with special needs. This promising direction was reported in a recent review by Boothe, Lohmann, Donnell and Hall (2018). In this poster, we will share the experience of implementing UDL principles in an on-line, entry-level, introductory course: Psychology of Education. This course was designed with the objective of servicing students from a wide spectrum of academic disciplines - as a compulsory course for those who are in a Teacher Education program, and as an elective course for students who are interested in the content of psychological theories applied to teaching and learning - and more importantly to service students with diverse learning abilities and needs. We examine the feasibility and challenge of incorporating key UDL principles - multiple means of Engagement, Representation and Action/Expression of learning - in the instructional design using an on-line platform. Evidence of positive student engagement was derived from the information management system, which allowed us to track students' on-going learning activities and patterns. We also developed and used a mid-course survey to elicit students' feedback about the accessibility, clarity and relevance of the learning activities. One of the main challenges encountered was related to the under-utilization of Discussion Boards, which we will address in the 2020 revision of the course, in order to promote greater interdependence and cooperation among students.

54. Incorporating Advocacy into the Undergraduate Academic Experience

Karen Longest, Oklahoma Baptist University

Nicole Warehime, University of Central Oklahoma

Enabling students to apply course content outside the classroom is a goal shared by many instructors. Many students also express an interest in learning how to apply what they know to real-world problems and promote social change. Teaching students about advocacy can address the goals of both groups. In addition, projects with an advocacy focus can provide an opportunity to assist students in identifying the skills they have developed as part of their undergraduate experience. This poster provides examples of incorporating advocacy at multiple levels: the curriculum level, departmental level, and individual course level. At the curriculum level, a minor in advocacy was developed and is described in terms of both coursework and advocacy projects. An interdisciplinary department-wide project to emphasize advocacy in multiple classes within the same semester is outlined. Examples of advocacy assignments used in multiple undergraduate classes are provided. The benefits of these advocacy projects for both the students and the community are discussed.

55. Teaching as an Underdog: The Benefits of being a Struggling Professor

Jane Mafale, Muhlenberg College

Kenneth Michniewicz, Muhlenberg College

Students' impressions of professors are determined by many factors including teaching style and emotional relatedness (Pianta et al., 2012). In this study, we experimentally examined the role of teachers' underdog identities, defined elsewhere as one struggling and facing impossible odds (Kim et al., 2008; Vandello et al., 2007). Generally, underdogs are simultaneously described as heroic and losers; while there may therefore be costs to an underdog identity, people like and support underdogs more (Vandello et al., 2007), as people identify with underdogs (Kim et al., 2008). We randomly assigned undergraduate Psychology students (N = 70) to a description about a professor in which the professor was described as struggling/disadvantaged (underdog) or not struggling/advantaged (topdog). We measured participants' perceptions of this professor on likeability, support, and the teacher behaviors checklist (Keeley et al., 2006). Our results indicated that participants did not rate underdogs and topdogs differently in their professional competence, however, underdogs received greater liking and support generally and were viewed as more caring and supportive on the teacher behavior checklist. After covarying perceptions of the professor as an underdog, these effects disappeared, suggesting the mediating role of underdog status in these perceptions of professors. Overall, while more research is certainly needed, our results thus far suggest that sharing an

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underprivileged background with students only benefits teachers. This is important given the potential stigma the underprivileged may experience upon sharing their life story. Students' perception of underdog professors as more caring, supportive, and likeable suggests a benefit to underdog status.

56. Do Teacher's Words Matter? Effects of Inclusive Language Use on Student Perceptions

Jeana Magyar, University of Wisconsin - Stevens Point

The AAC&U challenges higher education to address diversity, inclusion, and equity through making excellence inclusive. Although many educators endorse the importance of inclusivity, they often lament that they are unsure of how to create more inclusive classroom spaces and request specific strategies for doing so. This study examines the effects of utilizing inclusive language on student perceptions of instructors, predictions of levels of comfort in the classroom, and willingness to enroll in the course. Participants included 350 college students randomly assigned to one of four experimental conditions. Group 1 received a syllabus with a statement regarding the instructor's commitment to inclusivity and sample exam items that utilize inclusive (i.e., same-sex couple), diverse (i.e., names representative of minority cultures), and people-first language (i.e., children with special needs rather than special needs children). Group 2 received a syllabus without a statement regarding inclusivity and exam items that utilize neutral language and examples, leaving interpretation of the items up to the reader (i.e., gender neutral couples, referring to "parents" rather than to "mom and dad"). Group 3 received a syllabus with a statement regarding inclusivity and exam items that utilize neutral language and examples. Group 4 received a syllabus without a statement regarding inclusivity and exam items that utilized exclusive language and examples most relevant to those from privileged identity statuses (i.e., opposite sex couples, European names, and stereotypical representations of gender, race, etc). Recommendations for instructors regarding the potential benefits and risks of utilizing inclusive language and examples in their classrooms is provided.

57. Reviewing and Correcting Exams: A Boon to Becoming an Effective Learner or a Waste of Time?

Cade Mansfield, Weber State University

Many psychology faculty are interested in students becoming more effective learners through their department's curriculum. This idea is framed in terms of students becoming effective "Lifelong learners" (e.g., Appleby, 2001). Metacognition is key to effective learning (e.g., Zimmerman, 2002); something educators know but undergraduates often appear not to know. My project tests whether spending time finding correct answers to previously missed exam items and reflecting on why they were missed helps students improve on subsequent exams. Students in 3 Introductory Psychology classes (n = 242) and one upper level Child Development class (n = 32), completed assignments designed to foster attention on learning. Students found correct answers to missed items (using notes, textbook, classmates - no google), and wrote an explanation regarding why he/she thought the item was missed. At semester's end students completed a questionnaire on the assignment which included Likert-type items assessing the students' perception of the value of the assignments for becoming a better learner (e.g., "I changed the way I studied for exams as a result of the missed item review.") Analyses center on basic descriptives (how many students completed the assignments?), extent to which points attained on the preceding exam's item review assignment predicted changes in grade between exams, and students' perception of the value of the assignment for learning. Analyses computed to date reveal that in total 53% of students completed these assignments. Regression analyses reveal positive slopes between number of points attained on preceding exam review and change in grades between exams.

58. How Effective are Problem Based Learning Activities in Introduction to Statistics?

Heather Mitchell, Webster University

Problem based learning (PBL) is beneficial in many disciplines including engineering, economics, and psychological statistical reasoning. PBL as an instructional strategy often helps learners enhance higher level thinking by using highly relevant problems that employ a student-centered approach. Additionally, PBL increases both student's meta-cognitive awareness and their motivation toward such problem based learning activities in a statistics course. (Tarmizi & Bayar, 2010). For example, PBL scenarios can be most effective for students to use when describing the steps needed for solutions of the scenarios (Schraw & Barnacki, 2016). The purpose of this current study is to investigate the possible benefits of such PBL activities covered in an introduction to psychological statistics course. Activities used to get students involved with statistical concepts are effective. Specifically, such activities engage students in the learning process and help solidify statistical concepts for learners

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(Gnanadesikan, Scheaffer, Watkins, & Witmer, 1997). Specifically, this research investigated the beneficial effects of four course related PBL activities included in a 2000 level Statistics and Data Analysis course. Students participated in the four above-mentioned activities and provided anonymous feedback on each activity. Specifically, students were asked to give two ratings, ranging from 1 (not at all) to 6 (extremely). First, students rated how effective the activity was in helping them understand the statistical concept that was covered. Secondly, students also rated how likely they were to revisit the PBL activity and the information it included as they studied and prepared for their upcoming statistics exam.

59. Bringing Statistical Reasoning to the Fore: Scaffolding Graphical Literacy by Incorporating Advanced Graphs in Introductory Classes

Matthew Mulvaney, Syracuse University

Being able to interpret statistical graphs is an integral component of being able to understand the psychological research that is presented in journals and which constitutes our field. Statistical tables summarize the essential statistical decision-making in the social sciences and yet many students struggle to interpret and evaluate graphs. In order to help students become more effective graph readers, it is critical to build up their schemas of graph interpretation and to embed the interpretation of graphs in the context of students' content-based information (Shah and Hoeffner, 2002). Therefore, in my classes, I make graphical interpretation the core of my teaching approach, across all topics. For instance, if discussing policy considerations of same-sex marriage, I would start with a graph that summarizes the mostly nonsignificant comparisons between children raised in same-sex and opposite-sex households before moving on to a discussion of the policy considerations. In my introductory classes, I continuously incorporate variety of statistical tests, including meta-analyses, correlation matrices, t tests, as well as bar, pie, and line graphs. In the large lecture classes, we work through the interpretation of the graphs via clicker questions. I will then test them on the interpretations of the graphs during the exams. Introducing statistical reasoning thus helps to improve both the understanding of the content, the necessity of using empirical results to support claims, and aids in developing statistical and graphical schemas at the beginning of their learning about the field, from which they can use as a basis for deeper understanding.

60. Investigating the Impact of Inclusive Testing Practices

Melissa Paquette-Smith, Department of Psychology; University of California, Los Angeles
Courtney Clark, Department of Psychology; University of California, Los Angeles

As instructors, we strive to make our classes more inclusive. In this project, we investigate the effectiveness of two inclusive testing practices: 1) using more diverse names in test questions and 2) informing students that their names will remain anonymous for grading purposes in an Introductory Psychology class. Increasing the diversity of the names used in test materials is one way to reduce negative stereotypes about the representation of minority groups in the sciences. In Experiment 1, we investigate the impact of this practice on student performance on 4 low stakes quizzes. Half of the quizzes contained a greater proportion of female and ethnically diverse names and the other half did not. Although, preliminary analyses indicated that there were no differences in quiz performance, we are currently investigating whether there may be more nuanced psychological effects of this manipulation in a controlled laboratory task. In Experiment 2, we manipulated whether students knew that their exams would be graded anonymously (i.e., with the names removed). In one section, the policy was explicitly stated on the top of their exam paper and in the other section it was not. Students who were informed about the anonymous grading policy were more likely to recommend (on the post-course survey) that anonymous grading be used in other classes. Despite reacting positively to the policy, there were no differences in test performance. Taken together this work is an important step towards evaluating the impact of strategies that are being used to create more inclusive learning environments.

61. Peer Mentoring Program Complements Project Based Learning and Improves Academic Outcomes in Introductory Statistics Classroom

Zachary Pilot, University of Southern Indiana
Malinda Suprise, University of Southern Indiana
Cassandra Dinius, University of Southern Indiana
Alicia Olechowski, University of Southern Indiana

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Undergraduate research methods and statistics (RMS) is a foundational course in the psychology major. Students, however, often enter this course with trepidation (Dempster & McCorry, 2009; Freng, Webber, Blatter, Wing, & Scott, 2011) fueled by factors including preparedness for the material (Hudak & Anderson, 1990), the view that traditional lectures are boring, passive learning (Garcia, Gasiewski, & Hurtado, 2011), and statistics anxiety (Macher, Paechter, Papousek, & Ruggeri, 2012). RMS classes serve as gatekeeper courses for social science majors so classroom performance can impact student retention in those majors (Seymour, 2001). Accordingly, we redesigned our RMS course to be student centered, involve a semester long research project, and include problem-based learning activities. However, we were particularly interested in peer mentoring, so here we report the effectiveness of our redesigned approach focusing on the inclusion of a peer mentor program across two semesters. The primary difference between the control and experimental classrooms in the Fall semester was the presence of peer mentors. Both classrooms included peer mentors in the Spring semester. A MANCOVA using two pretests as covariates and all exams as dependent variables was conducted. Students who received support and guidance from mentors fared better than their counterparts in the traditional classroom setting. There were only consistent and marked disparities between classroom evaluations during the semester when mentors were absent from one of the classrooms. The lack of substantial differences in the Spring provides more support to our conclusion that offering peer mentoring to students in RMS courses enhances learning outcomes.

62. Assessing the Implementation of a Critical Thinking Intervention in Traditional and Online Courses

Joshua Rodefer, Mercer University

Julie Lanz, University of Nebraska at Kearney

Sarah Synek, Creighton University

Blase Rokusek, University of Nebraska at Kearney

The APA and a recent survey of employers identified critical thinking as one of the most important skills for baccalaureate psychology students to develop. Recent efforts have focused on making college education more accessible through distance learning. Developing online curriculums with similar outcomes to traditional delivery presents many unique challenges including critical thinking. Evaluating what constitutes effective teaching of critical thinking in online delivery remains unclear. This project utilized a critical thinking intervention that was implemented in online and traditional sections of Introductory and Abnormal Psychology at two universities. We used the revised Psychological Critical Thinking Exam (Lawson et al., 2015) to assess performance of students. Results from a 2x2 mixed factorial ANOVA suggested that collapsing across courses and school revealed a significant interaction between class type (online vs traditional) and time (pre- vs post-test), $F(1, 58) = 10.47, p = .002$, partial $\eta^2 = .15$. There were no significant differences in critical thinking between the online and traditional classes in the pre-test, $F(1, 60) = 2.60, p = .11$, partial $\eta^2 = .04$. Yet there was a significant difference in critical thinking in the post-test assessment, $F(1, 63) = 4.60, p = .04$, partial $\eta^2 = .07$. Specifically, the online classes performed better after the critical thinking intervention when compared to the traditional classes. Taken together, these data suggest similar interventions may improve critical thinking in undergraduates enrolled in online courses. Possible limitations include contributions of other pertinent factors that need to be further delineated.

63. Randomized Exam Wrapper Intervention in a Large Introductory Psychology Course

Shaina F. Rowell, Washington University in St. Louis

Elise M. Walck-Shannon, Washington University in St. Louis

Regina F. Frey, Washington University in St. Louis

Emily R. Cohen-Shikora, Washington University in St. Louis

Emily Spector, Washington University in St. Louis

Exam wrappers are an exercise where students reflect on their study habits and make plans for how to change them. There have been very few randomized control studies of the effectiveness of exam wrappers and existing studies often have small samples. We used a randomized experimental design to assess the effectiveness of an exam wrapper in a large Introductory Psychology course. Students were randomly assigned to either the study habits group ($N = 145$) or the health habits group ($N = 149$). About a week before the exam, students in the study habits group were reminded of advice from their instructor about effective study habits. Then they wrote about habits they wanted to maintain and change, and a specific plan for how they would do this. Additionally, these students wrote about a potential obstacle to their plan and created implementation intentions to help them overcome the obstacle. Students in the health habits group completed a similar exercise focused on health habits. All students completed post-exam reflection surveys where they answered questions about their study habits and

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health habits, including the study strategies they used, how distracted they were, and how much sleep they had. We contrasted exam performance and reflection survey results for the two groups. We found no evidence of an overall difference in exam scores between the study habits and health habits groups. However, there were differences in behaviors reported on the reflection surveys. We discuss implications for the design of exam wrappers.

64. Sharing Psychology: Merits of the High School Psychology Fair

Christopher Waples, University of Nebraska at Kearney

Resource scarcity in higher education continues to drive demand for faculty role expansion. Though long-standing expectations about teaching and scholarship remain largely familiar, the scope of service commitments is rapidly growing at a variety of institutions. Public institutions have taken notice of faculty integration in the recruitment process at private colleges and universities, prompting greater pressure on departmental units to take an active role in student recruitment. A high school psychology fair offers a relatively low-cost opportunity to simultaneously address the disparate elements of faculty responsibilities. Inviting high school students to campus to learn more about phenomena spanning the breadth of the field improves visibility for both your institution and the discipline. Critically, it provides a unique instructional format for existing students, allowing them to engage deeply with psychological phenomena, learning by sharing their knowledge with high school students. Though some demonstrations are recurring from year to year, the fair format also gives students an outlet for exploring phenomena of personal interest and developing unique demonstrations. It is an approach that promotes durable learning and enthusiasm for the underlying content for all involved. In this presentation, I will share qualitative impressions of the event's strengths and challenges from university faculty, high school faculty, and undergraduate students who recently participated in a fair that drew over 300 regional high school students. I will also share details about a variety of successful, low-cost demonstrations to clarify the feasibility of attendees their own implementing local events.

65. The Single Story, Stereotypes and Implicit Bias

William Wattles, Francis Marion University

Kayla Duncan, Francis Marion University

The Implicit Association Test demonstrated that when measured in such a way that they could not choose a conscious answer, the majority of (about 75%) of Americans showed a preference for whites over blacks. This implicit bias helps explain the persistence of racism in America fifty-two years after the Civil Rights act. In the past, we have led a weekly group as part of an undergraduate course on Racial Discovery. The group involved dialog about personal experience with race. It occurred between white and black students in a safe environment. This interaction resulted in a reduction in stereotypes as demonstrated in the writing of the students. This semester the group viewed a Ted talk by Novelist Chimamanda Adichie describing the role that a single story told from one point of view and one starting point plays in creating and maintaining implicit bias. Students were encouraged to identify the influence a single story somewhere in their lives and attempt to adopt multiple stories on that subject. This effort to adopt multiple stories took place in the group discussion and in their written assignments. We hope this approach will make students more aware of their biases and give them a tool for overcoming them.

66. Beyond 'Breaking the Ice': Building a Team in the Classroom

Sarah Wheat, New Mexico State University

Ashley Coker-Cranney, West Virginia University

In the classroom, icebreaker activities are used to introduce students to each other and diffuse tension through various physical and mental activities. These activities are typically performed at the beginning of the semester, before the creation of groups or diving into class content, never to be used again. The use of team building activities is a pivotal skill for professionals in applied sport psychology. Team building activities can strengthen team cohesion and increase group communication, which leads to greater task performance (Eccles & Tran, 2012; Paradis & Martin, 2012). These activities are useful in both team and individual sports, to strengthen bonds between athletes in achieving higher performance (Janssen, 2000; Newstrom & Scannell, 1998). Due to the growing field of sport psychology, implications for other areas of study and practice is important to consider. Team building activities from sport psychology have useful implications for the classroom. By using techniques typically used with sports teams in the classroom, instructors can specifically target individual needs of the groups in their current class such as lack of communication, decreased team cohesion, and conflict. Various methods can be applied through the semester and with

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specific intention based on characteristics of the students. This poster will focus on incorporating team building exercises to help 'fix' specific problems that educators may find students experiencing in the classroom. Materials will be available for instructors to consider applying to their own classrooms. Suggestions will be based on sport psychology literature influenced by applied social psychology.

67. How to Hybrid: Activities, Demonstrations, and Discussions in a Hybrid Research Methods Course

Ryan Winter, Florida International University

It seems like there is never enough time to lecture about research methods when limited to three lecture hours per week, but try teaching the same material in a one hour hybrid lecture! The key to a good flipped classroom is preparing students outside of the classroom and then honing their skills when they come to class through activities, demonstrations, and discussions. This poster will highlight several such activities that instructors can adapt for their classrooms, including teaching the standard deviation ("How do dogs and cats statistically differ in terms of height?"), looking at correlations ("Is your ice-cream preference really related to your personality?"), reverse-engineering hypotheses ("I'll give you the stimulus materials; you tell me what I'm predicting."), and questionnaire construction ("What's worse: a double-barreled question that is badly leading or written in a much better non-leading format, and is having an instructor who writes bad questions really not helpful?"). The poster will provide some information about how to set-up the hybrid lecture in a quick mini-lecture and then walk through introducing the activity and getting students to interact with one another to reach the desired learning outcomes. It will also note how to adapt these activities for online courses.

68. Diversity on Campus: Communication Campaign Improves Multicultural Attitudes and Decreases Intercultural Anxiety Among Undergraduate Students

Kimberly H. Wood, Samford University

Anna Hardin, Samford University

Caroline Crawford, Samford University

Amanda Howard, Samford University

Multiculturalism is an emerging topic on college campuses. It is also foundational to Psychology education. According to APA Guidelines for Undergraduates (2013; Goal 3), a primary goal of Psychology education is for students to develop a sense of social responsibility in a diverse world. The current paper presents a student-led communication campaign focused on multiculturalism as a potential class project for psychology students. As part of a senior-level psychology course, students designed and implemented a communication campaign on multiculturalism for the general undergraduate student community (Psych Week). Psych Week activities included writing articles in the campus newspaper, hosting tables in the common area, screening a relevant film and facilitating a discussion, having a sidewalk chalk campaign, and bringing a guest speaker to campus. The psychology students conducted a pre/post research study to assess the impact of Psych Week on the multicultural attitudes and intercultural anxiety among undergraduates. Eighty-two undergraduates completed all pre and post-testing measures. Results revealed that multicultural attitude increased from pre to post testing for undergraduates that attended Psych Week activities, but remained the same for undergraduates that did not attend. Further, data showed that intercultural anxiety decreased from pre to post for undergraduates that attended Psych Week activities, but remain the same for undergraduates that did not attend. Findings suggest that attendance of Psych Week events improved multicultural attitudes and lessened intercultural anxiety among undergraduates. This project could be integrated into a variety of psychology courses at any level of study. Implications are discussed.

69. Rationale Exercise to Improve Research Proposal Writing in Research Methods

Vanessa Woods, University of California Santa Barbara

Students struggle with mastering the representational knowledge required to write well in APA style in lower division research methods. This poster describes a teaching resource that is used to help students understand and apply the importance of having a rationale when writing up a research proposal for a Research Methods course. This exercise was designed with threshold concepts in mind, and was set up to change the students thinking and approach to writing the introduction of their proposal to include a strong rationale. Threshold concepts are usually troublesome for novices and "sticky" in that once they are realized they stick, and fundamentally change the approach (Meyer and Land 2006). In Psychology it is common for the Introduction

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section of an APA style paper to contain the rationale for the study and end with the hypothesis(es). Novice students assume the introduction is simply a literature review and spend copious amounts of time and energy summarizing others research without a clear direction. I have designed a rationale activity to help the students realize this threshold concept of the importance of a rationale. This exercise is designed to be flexible, and can be done with discussion in under 30 minutes. The exercise could be modified to be done in a lab or lecture setting. There is evidence from my courses that this is an effective exercise in increasing student understanding and application of the importance of a rationale in their research proposals.

70. The World's Fair: A Window into the Early History of Psychology

Linda Woolf, Webster University

Michael Hulsizer, Webster University

In 1893, the World met in Chicago for the Columbian Exposition. Eleven years later in 1904, the Louisiana Purchase Exposition was held in Saint Louis. More colloquially referred to as the "World's Fair," these international extravaganzas highlighted the advent of modernity with such wonderful advances as the automobile, the telephone, and other elements of progress in transportation, agriculture, the arts, and science. These exhibits were visited by individuals from across the states as well as the globe. As a new science, early psychology was very much present at these Expositions. This poster will highlight some the early psychologists who showcased their work at the Fairs, such as Joseph Jastrow, who put Helen Keller on display, and Robert Woodworth, who collected data on "primitive people," many of whom were part of the "human exhibits" of indigenous populations from around the globe. We will also discuss the 1904 Congress of Arts and Science, which was held in conjunction with the Fair, which Hugo Münsterberg, helped organize and featured many early psychologists (e.g., G. Stanley Hall, James McKeen Cattell, James Mark Baldwin, Mary Whiton Calkins, Robert MacDougall, Edward Titchener, C. Lloyd Morgan, Pierre Janet, and J.B. Watson). We will provide specific ideas for integrating this material into any History of Psychology course as well as introductory courses. Additionally, we will present material and provide resources related to the roots of racism and Eurocentric bias within the early history of psychology.

71. Classroom Sports Analytics: Teaching Data Skills for All

Mark Zajack, Hastings College

The demand for data science skills in the job market continue to grow (Bureau of Labor Statistics, 2019). However, despite the value of these skills, undergraduates with low mathematical self-efficacy are unlikely to voluntarily pursue courses with a data focus (Pajares & Miller, 1995). In a recent elective, I planned a creative approach to encourage data fluency, even for those who say things like, "I don't like math." In the course, "Quantitative Analytics in Sports," students explored the psychology of judgment and decision-making alongside techniques of data analysis. Course activities demonstrated intuitive decision-making biases and the ability to overcome these biases with a data-centric, systematic approach. Students self-selected research projects, developed hypotheses examining conventional wisdom in a sport, collected data, and evaluated support for hypotheses via a statistical analysis. All students successfully completed a data analysis project in the two-week, two-credit accelerated timeframe. Course evaluations indicated that the presence of "sports" in the title made the course attractive to some students who normally avoided math. Furthermore, student feedback indicated that the application of psychological theories on motivation and growth mindset to address potential barriers to learning subject matter (e.g., Deci & Ryan, 2000; Dweck, 2008) were related to successful outcomes. In addition to providing first-hand experience with data analysis, exposing students to our intuitive decision-making biases helped them to not only learn techniques of data scientists, but to understand the value of data-driven decision-making.

72. The Ethical Analysis Portfolio: Enabling Students to Reflect on Meetings with Convicted Sex Offenders

Kenneth Abrams, Carleton College

Every other fall I lead a Cross-Cultural Psychology study abroad program in Prague. There, the students and I visit Psychiatrická Nemocnice Bohnice, where we meet with a large group of convicted sexual offenders and their clinicians. Over the course of several hours, the individuals tell their stories and answer student questions. The students learn of a legal distinction made in the Czech Republic that is not made in the US: Sexual offenders diagnosed with a paraphilia are deemed unable to control their sexual behaviors and hence only minimally morally responsible for them. As such, they are treated much more gently by the judicial system than offenders without a paraphilia. In fact, the focus of the judicial process for paraphilic offenders is on

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behavioral rehabilitation and successful community reintegration. Following the visit, students are required to complete an Ethical Analysis Portfolio. This entails (a) constructing a fictitious case study that taps into the moral responsibility of sex offenders and includes challenging ethical questions (b) responding to the ethical questions associated with others' case studies, and (c) writing position papers on controversial means of assessment and treatment (such as penile plethysmography, chemical and surgical castration, and community notification laws). The case studies, associated questions, and top responses are posted online, where they can be employed by others to explore these ethical issues. Students often remark in course evaluations that the visit and papers, by forcing them to confront long-held cultural assumptions, are among the most powerful learning experiences they have abroad.

73. Statistical Reasoning Improvements in Underrepresented Minority and Non-minority Students in an Undergraduate Quantitative Psychology Course

Lisa Abrams, Rowan University

The purpose of this study was to investigate the difference in statistical reasoning improvements between underrepresented minority (URM) and non-minority students in a quantitative psychology course. To that end, students in Statistics in Psychology (N=107) completed statistical reasoning assessments at baseline, mid-semester, and end of semester. Demographics were collected, and URM groups were combined for data analysis. URM participants scored significantly lower on an arithmetic pre-course assessment compared to non-minority participants (URM: $M=76.35$ $SD=18.66$; Non-Minority: $M=81.16$ $SD=13.46$), $t(103)=2.18$, $p=.032$. There was also a significant interaction between time and ethnicity on statistical reasoning scores, $F(2, 210)=4.15$, $p=.017$. Specifically, there was no significant difference in reasoning scores between ethnicity groups at baseline ($p>.05$), but non-minority participants scored significantly higher on statistical reasoning tests mid-semester ($p<.001$) and at the end of the semester ($p=.004$). Additionally, researchers found a main effect of ethnicity [$F(1, 105)=11.89$, $p=.001$] showing that URM participants had significantly lower statistical reasoning scores overall (URM: $M=60.98$, $SD=14.75$; Non-Minority: $M=71.69$, $SD=14.31$). The results of this study indicate that URM students are not exhibiting the same improvements in statistical reasoning throughout the semester as their non-minority counterparts. URM students seem to be coming into quantitative courses with lower mathematics preparedness, and class structures may not be supporting URM students in a way that allows them to be as successful as their non-minority peers. This disparity needs further investigation to ensure that URM students have opportunities to achieve the same level of success as non-minority students, especially in the STEM fields.

Sunday, January 5, 2020

5:00-6:15 p.m.

74. plz get back to me asap: Student versus Faculty Perceptions of Writers of Poorly-Written Emails

Aimee Adam, Indiana University Southeast

This study represents the first stage of a project designed to encourage students to create professional emails. Anecdotally, I have noticed that even senior psychology majors often write emails that read more like text messages, even when asking for favors (e.g., wanting into a class) or when they have never communicated with me before. Students receive information on email etiquette throughout their college career, but do they see poorly-written emails as unprofessional? In this study, I am conducting a between-subjects experiment using Qualtrics and promoted via social media, in which faculty and college students are randomly assigned to read a poorly-written or well-written email to a faculty member, and evaluate what the professor thinks of the student who wrote it. Preliminary data analyses show that as predicted, the poorly-written email writer is seen as less competent and as doing poorly in their classes. Participants also express more negative affect toward the poorly-written email writer, and think the recipient of the email would be less willing to extend a variety of courtesies (e.g., extending a deadline) toward the email writer. After data collection is complete (November 2019), comparisons will also be made between student and faculty perceptions. The next stage of this project is to use the results of this study in courses in which email etiquette is taught, to reinforce the importance of creating professional emails in college and in the workforce, and assess the effectiveness of this strategy.

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75. Using a University-Wide Program to Integrate Critical Thinking in the Psychology Curriculum

Kimberly Badanich, University of South Florida Sarasota-Manatee

Jay Michaels, University of South Florida Sarasota-Manatee

Michael Gillespie, University of South Florida Sarasota-Manatee

Jennifer Post, University of South Florida Sarasota-Manatee

Critical thinking is a concept common to most academic institutions, and for good reason. Employers today value critical thinking as a skill over students' specific major, making the integration of critical thinking and complex skills a necessity for the psychology curriculum. This poster overviews the "Incredi-Bull Critical Thinking (IBCT)" program at the University of South Florida Sarasota-Manatee (USFSM) and details how the psychology faculty used this program to bring critical thinking to the core of requisite courses in the psychology major. Specifically, the poster presents the IBCT program's five outcomes and nine intellectual standards that are grounded in evidence-based critical thinking scholarship. An example rubric is provided to demonstrate how these outcomes and standards align with a major assignment for a research methods course. Additional examples of assignments in other courses are provided as a "snapshot" of how faculty are integrating the critical thinking program in various courses. The poster concludes by providing preliminary data demonstrating students' gains in critical thinking along with some select comments from student evaluations. It then offers tips and suggestions for how a critical thinking course can be integrated into other institutions' curricula for individual courses or for a dedicated program similar to that at USFSM.

76. An Image vs. a Thousand Words: Evaluating Introductory Psychology Students' Graph-Reading Abilities

Kristen Begosh, University of Delaware

Two field studies examined general psychology students' abilities to remember and interpret graphs. In the first study, a target research finding for each chapter was presented during lecture. Students in two sections saw the results displayed either in a graph or written in text. All students then responded to the same multiple-choice exam questions about the findings. Results of the current study show that on the first exam of the semester, students did reliably better on the exam question when the material was presented in text during lecture than when it was presented as a graph. There were no reliable differences between text and graphic presentation on either the second or third exams. The second study analyzed students' exam performance to determine if their ability to interpret graphs improved with practice. On each of three exams, students saw novel graphs and answered multiple-choice questions about them. Contrary to expectations, students' performance was worse on the final exam than either exams 1 or 2. This might have been because the graphs on exams 1 and 2 showed results in which greater height on the graph corresponded to a positive feature (e.g. accuracy), whereas greater height on one of the graphs on the final exam corresponded to a negative feature (e.g. error score). Students might not have carefully read the axis label and instead relied on their default interpretation of higher being better, resulting in many wrong answers.

77. Using the Insider-Outsider Approach to Establish Inclusive Classroom Guidelines

Angela Bell, Lafayette College

During the first week of an introductory social psychology class, students (N = 35) participated in an ice-breaker activity that identified feelings and behaviors associated with being an insider and an outsider (Stringer, 2014). The purpose of this activity is to engage students in conversations about their firsthand experiences with feeling included and excluded, and to develop lists of observable behaviors associated with inclusion and exclusion (e.g., feeling empowered can influence someone to initiate conversations more often vs. feeling unimportant can influence someone to stutter during conversations). Then, students identified what aspects they liked most and least about participating in the classroom. These aspects, which ranged from hearing new peers' interpretation of material to expressing fear of offending others, were linked to the insider-outsider concepts to generate a list of "best practices" to create a rewarding and productive classroom environment. One objective of creating this list was to develop a living rubric for class participation and group assignments. Another objective was to provide students with actionable items to practice inclusion throughout the semester. Pre-post semester measures of students' identification with the psychology major (Smith & White, 2001) and the extent to which they are fused with the goal of practicing inclusivity in the classroom (Hatvany et al., 2018) will be analyzed as pilot data. I anticipate that students will experience increased identification with the psychology major and be more fused to the goal of practicing inclusion following the implementation of the inclusive class-generated rubric.

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78. Busting Myths to Increase Critical Thinking and Interest in Psychology

Jennifer Blessing, University of Tampa

Increasing students' ability to think critically about science is of utmost importance in psychology classes. Blessing and Blessing (2010) effectively demonstrated a means to improve critical thinking with a General Psychology class assignment, "PsychBusters." This assignment required students to select a commonly heard statement about human behavior and research its origins and its veracity. Their findings indicated that students' class presentations of their findings improved critical thinking in all members of the class when compared to a class which did not include the assignment. The current study is an extension of Blessing and Blessing (2010) with a unique sample. Two sections of General Psychology were specially designated for first year students intending to major in psychology. One section was assigned to complete the PsychBusters class presentations along with a PsychBusters poster presentation at the end of the semester. The other section did not use the PsychBusters assignment but has been assigned a different poster presentation. I measured the critical thinking in students in both sections as well as their level of interest in psychology as a major. I evaluated post-assignment critical thinking as well as changes in interest in psychology. I expect that students' engagement in critical thinking assignments will improve such skills as well as strengthening their interest in majoring in psychology. I consider that this opportunity for improving skills and interest in first year students might lend itself to better retention within the major.

79. Integrating Skills and Content into Introductory to Psychology

Deanne Buffalari, Westminster College

Many introductory psychology (PSY101) teachers express concern over how to incorporate skill development into class without sacrificing significant content. As PSY101 is often the foundational course for the undergraduate major, educators might feel obligated to provide a strong content base. Yet, the American Psychological Association's guidelines emphasize skills. Entering PSY101 students at a small, liberal arts school were assessed for familiarity and experience with research methods and articles. Three modules that specifically integrated scientific skills with content to varying degrees were developed, implemented, and assessed in PSY101. Students had a wide range of experience with research entering PSY101. Many stated they had designed experiments before, yet only ~25% could design a controlled experiment with independent and dependent variables when asked. Previous reading of scientific articles ranged in number from 0-20+; comfort level with articles was also highly variable. Based on student performance, our modules varied in their effectiveness. For example, in a module where students identified research perspective, main goals, and main findings in 5 scientific abstracts about aggression (with no prior content on aggression), their ability to identify these factors in subsequent abstracts improved (83% average assignment score). Yet they showed varied recall of 1) the main topic as aggression (85% correct), and 2) factors related to aggression (avg of 1.8/5 possible factors). Modules that first introduced main content followed by applied assignments in which research skills were the focus seemed most effective. Future work will refine the integration of content and methodology/skill in modules relevant to PSY101.

80. Do Novice College Instructors Teach Workforce-Relevant Skills? Associations with Teaching Formats, Teachers' Sense of Autonomy, and Valuation of Student Autonomy

Elizabeth S. Che, The Graduate Center, CUNY

Anna M. Schwartz, Boston College

Ethlyn S. Saltzman, The Graduate Center, CUNY

Ronald C. Whiteman, Baruch College, CUNY

Patricia J. Brooks, College of Staten Island and the Graduate Center, CUNY

Given evidence that fewer than half of undergraduates who obtain bachelor's degrees in psychology pursue advanced degrees, there has been a call for stronger curricular emphasis on the development of transferable skills and workforce readiness (Appleby 2014; APA 2016). Our study asked novice college instructors whether they taught workforce-relevant skills in their courses, and how this related to use of various teaching formats, their sense of teaching autonomy, and beliefs about the value of student autonomy. Participants completed an online Qualtrics survey (N = 121; 71.9% women, Mage = 30.4 years). We used items from the Employable Skills Self-Efficacy Scale (Ciarocco & Strohmetz, 2018) to create a Likert-scale measure of the extent to which instructors teach workforce-relevant skills. Principal Component Analysis (PCA) indicated six item-clusters, arranged here in decreasing level of endorsement: (1) information literacy, (2) self-management/professionalism, (3) research/technological skills, (4) leadership/group-work, (5) oral communication, and (6) written communication. We also asked

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instructors how often they used various teaching formats, with PCA indicating four item-clusters, arranged in decreasing level of endorsement: (1) direct teaching (lectures, video-clips, quizzes), (2) fostering discussion (low-stakes writing, class discussions, group-work, think-pair-share), (3) research and data (demonstrations, data collection, labs), and (4) interactive lessons (role-play, interviews, games). Teachers' sense of autonomy was measured using an existing scale (Pearson & Moomaw, 2006); we adapted this scale to also assess teachers' valuation of student autonomy. Regression models indicated significant alignment of workforce-relevant instruction with choice of teaching formats, teachers' sense of autonomy, and valuation of student autonomy.

81. Difficulties with Emotion Regulation in College Students

Anthony Cleator, Middle Georgia State University

James Collins, Middle Georgia State University

In 2010, a national survey of undergraduate freshmen showed record low levels of emotional health. This trend continues. The importance of promoting good mental health outside of counseling begs the question: Could an understanding of emotions and emotional processes improve emotion regulation? To test this, a pre-test post-test quasi-experimental design was implemented with a Motivation and Emotion course acting as the treatment group intervention and an Introduction to Psychology course taught by the same professor serving as the control group. The Difficulties in Emotion Regulation Scale (DERS) was used to generate the data for analysis comparing the treatment and control groups at the beginning and the end of an academic semester. Lower scores on the DERS indicate better emotion regulation. Results did not indicate a statistically significant difference in DERS score changes between treatment and control groups, but a significant decline from pre- to post-test scores in the control group was found. Future studies will involve a control course outside of psychology to separate the influences of the subject from those of the college experience.

82. The CogBlog: Integrating Public Writing in the Classroom to Help Students Communicate Science Effectively to Lay Audiences

Jen Coane, Colby College

Psychology majors receive extensive training on writing scholarly, empirical reports that follow the conventions of the field. An equally important skill for students is being able to communicate scientific findings - their own or those of other researchers - to diverse audiences, such as laypeople. Although the advent of Open Sciences practices and rise in open-access journals does increase the accessibility of knowledge to wider audiences, a fundamental roadblock remains in that many primary sources are written in highly technical forms and frequently include jargon. Thus, training students to write in both formal, academic language and in accessible formats is important. Furthermore, given that a majority of undergraduates will not pursue higher degrees, but will join the workforce, giving them with the skills to adapt their writing and communication to diverse audiences will provide lasting benefits. Over the past few years, students in courses in cognitive psychology and memory at Colby College have produced blog posts that are disseminated via the CogBlog (web.colby.edu/cogblog). This site appears in online searches and was recognized as one of the 10 best psychology blogs in 2017 by another site. For this graded writing assignment, students write a detailed, citation-rich description of a phenomenon and integrate course content to provide a lay reader with an understanding of a recent finding in the field or a cognitive bias and how it might affect aspects of day-to-day life. Students thus practice applying their knowledge to a real-life problem and discussing theories and evidence from cognitive psychology in their writing.

83. Effectiveness of a Stress Management Course on Physical Symptoms, Perceived Stress, and Coping Skill in College Students

Amy Eperthener, Edinboro University of PA

The purpose of the study was to identify students' perceptions of stress, assess their coping skills, and evaluate the effectiveness of a stress management course on more than 200 college students. Data for this study were comprised of information collected as part of the required course activities. Students completed a packet of data collection instruments. The packet included a stress profile to identify physical symptoms of stress, a perceived stress scale, and stress coping ability self-assessment. Students were asked to identify how often (e.g., once a month, once a week, every day) they experience physical signs of stress, such as headache, fatigue, sleep issues, or anxiety. A series of questions determined their current level of stress

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as low, moderate, or high. Students answered questions related to wellness, thought control, social skills, and spiritual practices to determine their coping ability as below average, average, or above average. Demographic data such as gender, school year, age, and major were also collected.

84. The United States of America: How Politics Can Inspire the Teaching of Undergraduate Statistics

Erin Freeman, University of Oklahoma

Recent recommendations for the teaching of undergraduate statistics in any field emphasize the need for students to become critical consumers of results presented in the popular media while also developing proficiency in the collection, presentation, analysis, and communication of their own data (GAISE College Report ASA Revision Committee, 2016). Though undergraduate statistics instructors may strive to build a curriculum that follows these recommendations, they often find themselves facing an immediate roadblock: student disinterest and anxiety in the subject matter itself (Onwuegbuzie & Wilson, 2003). How can we encourage students to invest in the course material so that we can meet our pedagogical and academic goals? Can we present the material in a way that not only increases their statistical understanding, but also feels relevant to them and to their sense of civic engagement? This poster will present ways in which the current political environment can inspire the teaching of statistical concepts. Specifically, I will give several examples of how I use public statistics related to the 2020 Democratic Presidential Race (e.g. polling numbers, financial donations, Facebook likes) to teach many concepts in my introductory undergraduate statistics class (e.g. descriptive statistics, correlation and regression, measurement and sampling).

85. Ready or Not: A 7th Edition of the Publication Manual

Mark Hatala, Truman State University

A new revision of the Publication Manual of the American Psychological Association was released in October of 2019. It has been 10 years since the previous revision, and the Publication Manual is now in the 7th edition. What changes have been made between the 6th and 7th editions and what will students and faculty need to change in their writing to conform to the expectations presented in the new edition? Previous research has found that revisions in the Publication Manual lead to patterns of errors in academic writing. For example, after the previous revision was released, Onwuegbuzie, Combs, Slate, and Frels (2010) took a data-driven approach to APA style by examining 110 papers submitted to the journal *Research in the Schools*. Onwuegbuzie et al. copyedited the papers for APA style errors and found that the most common errors were in the incorrect use of numbers and statistics. In addressing this problem, the 7th edition provides information and guidance about journal article reporting standards (JARS) for quantitative research, qualitative research, and qualitative meta-analysis. To a lesser extent, Onwuegbuzie et al. found problems in researchers use of abbreviations, capitalization, and hyphenation. In this poster, writing samples are used to illustrate the changes to APA style with the 7th edition of the Publication Manual, and to highlight best practices for professors in conveying the changes to students (and colleagues) who are familiar with the previous edition(s) of the Publication Manual.

86. New Electronic Technology in the Classroom Enables Large Classes But has Unintended Negative Effects: Smarter is New Technology Plus Past Effective Teaching Practices

Robert Konopasky, Saint Mary's University

New electronic technologies, like Powerpoint, push bits of information, and writes them on a large screen. Unfortunately, this format makes the issues appear settled; this discourages students from challenging the title-length "facts" in the tiles. Add public-address-systems to amplify the lecturer's voice to these "billboards" in a large room, and the lecturer and lecture will become big and the students will (feel) small; students asking questions or commenting will be uncomfortable. Better than just adding new technology is also modifying and returning to effective past teaching practices: i.) Listening to, and caring for students, the earliest effective practice, followed by a will to adapt the lecture to serve students, will positively affect their learning. ii.) Teaching note-taking and setting aside time for it, even in a large lecture hall, ensures that students reduce what they heard to what they think is important. Hearing a different rationale for notes taken by other students wakes up everyone. iii.) Lecturers can create a mini-apprenticeship in academics by having some students take a position and defend it, an especially valuable exercise if students believe what they are saying. Class approval will strengthen the students' hold on information. No less effective, reacting to a counter-argument will make students' beliefs durable. The real test for lecturers is not the mastery

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of their material; rather, it's bending inevitable, large-class technologies, for example, by creating in-class mini-apprenticeships in academics, to help students develop judgment and skills, and make some learning for keeps.

87. Can One Semester of an Upper-Level Research Methods Course Impact the Research Confidence of Undergraduates?

Alison Levitch, County College of Morris

Past research suggests that the ability to find, read, and interpret primary sources including peer-reviewed journal articles may be challenging to undergraduate students; however, this is a necessary skill that psychology students can learn. The present study investigates the confidence of upper-level undergraduate students taking their first required upper level research methods course. Participants' self-reported responses to surveys were analyzed at the beginning (n=23) and end (n=17) of the semester. Surveys incorporated items targeting perceptions of one's ability to locate and comprehend empirical journal articles at different times across one semester-before and after receiving instruction, guidance, and applied experiences doing both. Preliminary descriptive analyses indicate that 52% of the beginning-of-the semester participants and 100% of end-of-the semester participants report confidence in their abilities to read and comprehend journal articles. Forty-three percent of beginning-of-the semester participants and 77% of end-of-the semester respondents report confidence in their abilities to locate journal articles highlighted in other media stories. One hundred percent of participants rate their competence at comprehending research articles as the same or better at the end of the semester than at the start of the semester. One hundred percent of participants rate their competence at finding journal articles utilizing databases as the same or better at the end of the semester than at the start of the semester. This study contributes to understanding what learning opportunities may be beneficial to students in upper-level research methods courses to help students gain confidence finding and reading the professional literature as consumers of research.

88. Classroom Shenanigans: Using Deception and Discomfort to Engage Student Learning

Chelsea Lovejoy, University of Wisconsin - Stout

Alicia Stachowski, University of Wisconsin - Stout

The purpose of this project was to evaluate undergraduate student interest and perceptions about using deception and discomfort in the classroom to enhance their learning by demonstrating psychological concepts during the Spring of 2019. Starting on the first day of class, 32 students enrolled in a Social Psychology class participated in 11 activities covering a range of social psychology topics that utilized various forms of omission and direct deception. In some instances, students were also instructed to deceive each other. For other activities students were challenged to expand their boundaries in ways to experience some discomfort to help them understand themselves, others and the relevant theories. Students were asked to reflect on their experiences via a survey completed at the end of the semester. Thirty-two students reported their agreement regarding their level of interest, person relevance, critical thinking, and the use of deception for learning. In sum, students reported a mean of 6.13 (SD = 1.01) for level of interest, 6.34 (SD = 0.94) for person relevance, 3.78 (SD = 0.64) critical thinking, and 5.88 (SD = 0.58) regarding use of deception for learning. All these means were well above the midpoint of 4 (except for the critical thinking scale, which was out of 5 points). These results have implications for engaging students in more interactive classroom applications of the material, which have the potential to strengthen their memory for these concepts long term. This idea was supported by the student qualitative responses, which will be discussed.

89. When Being in a Fishbowl is Comfortable: Empirical Evaluation of a Discussion Technique

Maddison Maffeo, Saint Martins University

Lindsay Meyer, Saint Martins University

Michaela Monson, University of Michigan

Psychology classrooms are often hubs for socially and emotionally sensitive discussions. There are a number of pedagogical approaches to manage these discussions, but few are empirically tested using the college population. The fishbowl technique arranges students into two concentric circles and invites students to practice prosocial communication skills including active listening and effective speaking. The current study explored the impact of the fishbowl technique in multicultural psychology classroom discussions. Participants included sixteen students enrolled in multicultural psychology. Participants engaged in classroom discussions throughout the semester with and without the fishbowl technique. They completed a questionnaire at the beginning, middle, and end of the semester which assessed the impact of the fishbowl technique on engagement in

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discussion (verbal and listening), comfort in participating in discussion, and the extent to which the technique led to behavior and perception change outside the classroom relative to discussions without the technique. Results indicated while level of engagement with listening did not change across the semester or across discussion techniques, engaging through speaking trended up during fishbowl discussion days and trended down on discussion days without the fishbowl technique. Comfort with discussion trended up across the semester on discussion days both with and without the fishbowl technique. Finally, participants reported fishbowl discussion days changed their behavior outside the classroom more so than discussion without the fishbowl. While there are numerous methods for managing classroom discussion, few are systematically researched in the college student population. These preliminary data indicate fishbowl technique may be an effective tool in creating a safe and comfortable place for college students to engage in difficult classroom discussions and also invite positive behavior change outside the classroom.

90. Multi-Teaching with One Task

Connie Meinholdt, Ferris State University

In Introductory Psychology I use the "Sheep Dash" reaction time test to teach about research methods and cognitive processing. We begin with the question, "Can students multitask?" Students watch a video about multitasking research that shows decreased attention and increased reaction time when drivers use a cell phone (Strayer, and Johnston, 2001). Afterward, students complete the online reaction time test 1) in a quiet room without distractions, and 2) while talking with a friend on their cell phone. Students report their reaction times in each condition, and evaluate their multitasking abilities. We talk about this method of collecting data to test the hypothesis that information processing is impaired when students are multitasking. A repeated measures t test with the reaction time data, ($t(df = 208) = -8.209, p < .0001$) shows students are significantly slower in the phone-a-friend condition. Generally, about 8% of students are faster when on the phone, and I ask students to explain why. They generate possible explanations that allow us to talk about practice effects, randomness, validity (adequacy of the attention measure), etc. The memory chapter, which includes experiments measuring attention span, serial processing, and short-term memory capacity, is covered following research methods. Students can evaluate whether their experience with the reaction time test is or is not consistent with how psychology explains serial processing and other memory functions. References: Strayer D.L, and Johnston, W.A. (2001) Driven to distraction: Dual-task studies of simulated driving and conversing on a cellular phone. *Psychological Science*, 12, 462-466.

91. When Students Discover Research is Fun: Using the General Social Survey in Research Methods and Statistics Classes to Immerse Students in Real Research

Jay Michaels, University of South Florida Sarasota-Manatee

Research methods and statistics classes are required in most psychology programs. In such classes students often develop research proposals or work with statistical software to analyze fictional data. However, these courses afford opportunity to introduce students to the challenges and excitement of real research. At some smaller institutions, students may have opportunity to develop and conduct their own research studies. Yet, in larger classes or at institutions where an IRB review would be necessary for students to complete such work, these options are typically not viable. Wanting my students to experience the process of analyzing real data, I developed an intensive course project that has students work with General Social Survey (GSS) data to develop their own research questions and hypotheses and then use SPSS software to analyze their data and attempt to test their predictions. In this poster, I present how I integrate this project in an advanced undergraduate statistics class. I provide full details on how the assignment is structured and woven throughout the semester-long course. I also provide peer-reviewed rubrics that I use to evaluate students' research project reports and conference-style presentations. In addition, I include course evaluation data with selected comments from students and showcase how some students found their projects so engaging that they went on to present their work at undergraduate and professional conferences. Finally, I provide suggestions for how educators could modify my assignments so that they would be appropriate for less advanced courses such as introductory statistics and basic psychology research methods.

92. The Catcher in the Lie: Changing Students' False Beliefs in a Post-Truth Era

Krista R. Muis, McGill University

Michael J. Foy, John Abbott College

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"Alternative facts" are part of today's popular press and social media. It is not surprising individuals hold misconceptions about topics relevant to their daily lives, like vaccinations, and genetically modified foods (GMFs). As previous research has shown, individuals' misconceptions about a particular topic can undermine understanding of it (Sinatra, Kienhues, & Hofer, 2014). For learning to be fruitful, it is critical to support conceptual change; that is, restructuring misconceptions to align with correct conceptions (Dole & Sinatra, 1998). One approach used to change individuals' misconceptions is providing refutation texts (Sinatra & Broughton, 2011). Refutation texts persuade individuals to change misconceptions by explicitly identifying misconceptions and explaining them in scientifically correct terms (Kendeou, Walsh, Smith, & O'Brien, 2014). However, misconceptions are also linked to negative attitudes, which can make correcting misconceptions challenging (Broughton, Sinatra, Nussbaum, 2011). Fortunately, correcting misconceptions can shift attitudes toward a more positive stance, which predict learning and conceptual change (Thacker et al., 2018). Emotions related to controversial topics can also facilitate or constrain learning processes and outcomes (Muis et al., 2015). Evidence suggests that emotions mediate changes in attitudes and conceptual change given that they facilitate or constrain cognitive processes (Muis et al., 2018). One relevant cognitive process is epistemic judgments. When individuals are presented with information that is counter to what they believe, they may engage in judgments about whether the information is valid and whether the source is trustworthy (Sinatra & Seyranian, 2016). However, epistemic judgments may be constrained via negative emotional reactions toward the information. As such, interventions that foster positive attitudes and emotions are needed to increase engagement in epistemic judgements for conceptual change. We address this gap in the literature. Across two studies (N = 126 on GMFs; N = 76 on vaccines), psychology students were randomly assigned to read a refutation text with positive attitudinal content about GMFs or vaccines (REFP), a refutation text with negative attitudinal content, an expository text with positive attitudinal content, or an expository text with negative attitudinal content. Prior to reading, participants reported their attitudes toward GMFs or vaccines, and completed a prior knowledge measure. Emotions and epistemic judgments were measured via think aloud. At posttest, participants reported their attitudes and completed a knowledge measure to assess conceptual change. Results across both studies revealed that participants in the REFP condition experienced more positive emotions, held more positive attitudes at posttest, engaged in more epistemic judgments of the information, and subsequently changed more misconceptions compared to participants in the other three conditions. These results have important instructional implications for the teaching of psychology.

93. How the Sequencing of Topics in Introductory Psychology Influences Student Success

Jeremy Newton, Saint Martin's University

Most introductory psychology textbooks follow the same or similar order of topics. Often, after an overview of history and psychological methods, texts cover neuroscience before moving onto experimental and clinical areas of psychology. This sequence of information can prove daunting to a new college student, particularly those who might be underprepared or come from a first-generation college student background, potentially leading to poor performance in the class, which in turn can lead to attrition. I propose that the order of topics covered in introductory psychology be changed to cover material more relevant to the first-year college experience early in the semester. For example, after an overview of history and methodology, students can then be exposed to basic mechanisms of memory research, applying their findings on the topic to the method of their own studying. Additionally, the topics of anxiety and stress/health could be covered in the early part of the semester as well, as those topics often apply to those individuals in transition. Once the first exam is complete, other psychological topics could be covered, including topics that students commonly find to be challenging, such as neuroscience. The difference of course, is that students will encounter this challenging information with the experience of having completed the first exam, whilst also having been exposed to study techniques, and a basic understanding of the mechanisms of anxiety. This allows them to take on those topics with a higher level of confidence, increasing opportunities for success in introductory psychology and college more generally.

94. The Student Cognition Toolbox: Empowering Students to Become Better Learners

Catherine Overson, University of New Hampshire

Victor Benassi, University of New Hampshire

Students enter college with a variety of past experiences and beliefs about how to prepare for assessments of their academic performance. Considerable research supports that most students prefer and use study strategies that are ineffective relative to strategies supported by applied research on cognition. In addition, this research shows that different study strategies are

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needed for different kinds of learning-one size does not fit all. Perhaps most concerning is that less able students are especially prone to using study strategies that are relatively ineffective and inefficient. In our prior work, we found in an introductory psychology course that students with lower SAT scores reported using study approaches that research shows to be relatively ineffective, compared to students with higher SAT scores. Exam scores bore this out: Students who reported using primarily deep processing strategies tended to perform better on the exam compared to students who reported using primarily shallow processing strategies. In order to address this finding, we have developed and recently deployed a comprehensive set of online instructional materials, the Student Cognition Toolbox, situated within Carnegie Mellon University's (CMU) Open Learning Initiative (OLI; <http://oli.cmu.edu>), that inform students about cognitively-supported effective and efficient study strategies. A distinctive feature of our Toolbox is that lessons include a practice component that will assist students in mastery of that strategy. We will report on a number of assessments that examine whether and how students use their newly-acquired skills, as well as the impact of their use on academic performance.

95. A Hybrid Course Structure to Add Discussion Sections to Large Psychology Courses with Limited Staff and Time

Alison Papadakis, Johns Hopkins University

Meghan McGlaughlin, Johns Hopkins University

Carolina Daffre, Johns Hopkins University

Many faculty want to use active learning methods and small group discussions in large lecture courses to engage students, improve learning, and diversify assessment methods. Hybrid designs are one method to achieve this. Meta-analyses demonstrate improved learning in hybrid courses, but the effect sizes are smaller in social science versus STEM courses (Bernard et al., 2014; Vo et al., 2017), suggesting room for improvement in hybrid designs in psychology. Also, typically hybrid designs require increased staffing or additional instructor face-to-face time. We will share a hybrid course structure (adapted from Luck, 2015) that we used to address those challenges in our redesign of a 200-student Abnormal Psychology lecture course with one instructor and one TA. The redesigned course included 19 in-person lectures and five online lectures, which made room for five small in-person case study discussion sections without increased staffing or instructor class time. Compared to the original, the redesigned course had higher ratings on classroom atmosphere, ways to demonstrate learning, and opportunities to learn and apply course material, critically analyze information, and engage in meaningful discussion. Students who experienced the hybrid course had a greater preference for that structure versus students from the original course. Final exam scores demonstrated increases in student case study analysis skills. We will share strategies that increased the feasibility and success, including the course schedule, method to assign students into sections, structure of online lectures and quizzes, participation rating system, and case study assignment structure to maximize learning and minimize faculty workload.

96. Student's Perceptions of Movement-Integrated Learning Activities in a Sport and Performance Psychology Class

Michael Rhoads, Metropolitan State University of Denver

The lack of student engagement in the college classroom is a concern that teachers address with a variety of pedagogical approaches (Trowler, 2010). One such approach to enhance engagement is the use of movement-integrated learning. Previous studies have shown the benefits of adding movement to the classroom in both the primary and secondary school-aged population (Bobe, Perera, Frei, & Frei, 2014). Additionally, neuropsychological research has shown that movement and exercise can help to increase people's attention span and facilitate healthy brain function (Ratey, 2013; Suzuki, 2015). Weaving movement into classroom learning activities has also been applied to the college classroom with students perceiving enhanced concentration and enjoyment (Rhoads, Kirkland, Baker, Yeats, & Grevstad, in review). The purpose of this study was to explore students' perceptions of movement-integrated learning activities in a sport and performance psychology classroom. It is hypothesized that students in this class context will be particularly responsive to a physically active teaching approach as many of these students are current or former athletes. As part of the course, students were encouraged to participate in various movement-integrated learning activities (split room, sports galore, walk & talk, and stretch & review). A quasi-experimental design was implemented to compare students' perceptions of learning under the experimental condition and the control condition. To assess students' perceptions of concentration, enjoyment, and learning, the experience sampling method was used. Data will be analyzed with a repeated measures ANOVA. The results of the study will be discussed in terms of policy, practice, and future research.

97. Insights about Teaching Psychology, Scholarship, and Being a Productive Faculty Member

Gary Rosenthal, Department of Psychology, Counseling and Family Studies, Nicholls State University

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This presentation consists of several insights I had while teaching psychology over thirty-five plus years at four Universities. It will cover (among other topics): 1) lecturing, 2) test and syllabi construction and 3) preventing cheating. Some of my ideas have been harvested from previous National Institutes on the Teaching of Psychology (I've been to about thirty). I believe at least one or two might save you some time and/or grief. For example, after exporting the item-bank, I convert all of my test items (test-bank and the questions I have written) into a Microsoft Word© document. Using Word's features, I place the correct answer on the line below each question (along with its page number if it appears in the book). I scroll down this file and select the questions for that particular test (cutting and pasting them into a second document), when I am through, the "Answer Key" is already finished. Once I have saved the Answer Key, with one additional keystroke (a macro), a perfectly formatted test is produced and I save it. Why use publishers' test creators, when you can do it more simply yourself on a program you mastered years ago? I have some other good ideas and stories, like how I caught a cheater days AFTER the final was graded. Feel free to come by and we can discuss them, and maybe next NITOP I can present some of your insights.

98. Stability in Undergraduate Student Study Techniques

Christopher Rowland, Eckerd College

Examinations of study techniques most commonly employed by undergraduate college students have revealed a concerning uncertainty as to what approaches are most effective for long term retention and academic performance. Studies conducted by Karpicke et al. (2009), and Hartwig and Dunlosky (2011) revealed that a majority of sampled college students engage in re-reading material as their predominant study habit, while forgoing more effective, empirically validated techniques such as self-quizzing and other forms of retrieval-based learning. However, the extent to which undergraduate student study habits (and students corresponding meta-cognitive awareness regarding the effectiveness of such habits) might change over the course of a semester, is unclear. In light of such observations and considerations, data are presented showing that, in a large sample of multiple Introductory Psychology courses, students tend to both report the use of- and the belief in the efficacy of- objectively inefficient study techniques such as passive re-reading. Furthermore, self-reported study habits and beliefs about those habits appear to remain relatively stable throughout the duration of semester-long introductory Psychology coursework, despite the presentation of empirical data in support of retrieval-based learning in the context of classroom sessions.

99. Using Difficult Umpire Calls in Baseball to Illustrate Psychology and Physics Concepts

Sarah Starling, DeSales University Steven Sweeney, DeSales University

We examined whether including the example of an umpire would increase student interest in learning about auditory and visual processing and improve knowledge retention. Because the umpire cannot view both the glove of the first baseman and the foot of the runner simultaneously, they listen for the ball while looking at the foot. Thus, they are influenced both by differences in the speed of sound and light (faster speed of light) and differences in neural processing speeds (faster auditory processing). One section (n=26) viewed video clips of tough calls at first base and discussed difficulties faced by the umpire. Another section (n=23) did not have this example. As compared to neutral, students reported that the baseball example: was a valuable learning experience ($p < 0.0001$), increased their interest in the biological aspects of psychology ($p < 0.0001$), and made learning about neural processing more interesting ($p < 0.0001$). They also felt that they would be successful on an exam question on this topic ($p < 0.05$). For the baseball example class, accuracy on the relevant question for the end of class post-quiz (88.5%) and unit exam (69.2%) did not significantly differ ($p = .28$). However, accuracy from the post-quiz (91.3%) to the unit exam (41.7%) for the class without the baseball example did significantly drop ($p < .005$). The same pattern was found for the post-test and final exam. This suggests that the use of real-life examples may be beneficial for long term knowledge retention. The use of this example in an introductory physics class is also discussed.

100. Motivations and Values: Immersive Mentorship Science Experiences

Margareta M. Thomson, North Carolina State University

Reade Roberts, North Carolina State University

Lindsey Hubbard, North Carolina State University

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Purpose: The current study, funded by the National Institutes of Health (NIH), aimed at investigating motivational aspects related to teachers' immersive experiences in an innovative science program, and impact on student outcomes. Participants (N=40) are novice teachers from high-poverty schools involved in a mentorship research program with scientists from two renowned biomedical research communities in the United States. Data were collected at three times during the academic year, including online surveys, focus groups, and individual interviews. Contemporary motivational theories (i.e., expectancy-value) are used to frame and interpret study findings, and to understand the interplay of motivations and values as related to changes in behavior (Wigfield & Eccles, 2000; Wigfield et al., 2004). Research has documented the influence of value and efficacy on instructional practices and student achievement (Sharp et al., 2011). Findings: Study findings suggested that most participants exhibited intrinsic motivations and values for the program. Additionally, personal and social task utility values were related to participants' desire to apply the knowledge and skills gained in the program. All participants experienced changes in their thinking about science, and understanding the research process from a different perspective, such as taking a more inquiry approach (e.g., active learning). The positive impact of the program is evident, as the program has the potential to motivate and increase the number of teachers and students, and therefore community members, in environmental health science literacy, opening the door for more involvement in scientific research and decision making for improved health (Coburn & Russell, 2008).

101. A Comparison of Qualitative Research Methodology Content in Introductory Psychology Textbooks in the UK and the USA

Yuma Tomes, Sam Houston State University

Lauri Hyers, West Chester University

Eilleen McBride, Emerson College

Amy Martin, Rockford University

After decades of relative invisibility, qualitative modes of inquiry are beginning to gain recognition for the various roles they have played in the scientific process. With newly established qualitative curricular standards, research journals, and publishing guidelines, there is a greater need for qualitative research methodology to be infused throughout the psychology curriculum. This poster explores the representation of qualitative methods at the earliest stage of psychological education, Psychology 101 (or similar) courses. More specifically, we explore the frequency and nature of qualitative content of introductory Psychology textbooks in the USA and the UK using a mixed methodology. Quantitative comparisons are made using frequency counts of the number of times explicit reference is made to qualitative methodology in the table of contents and indexes of the USA and UK textbooks. Qualitative descriptions of the nature of the qualitative content are also summarized using thematic analysis. We discuss the need for greater training in qualitative methods, and cultural differences between the valuing of quantitative approaches in the US and UK contexts.

102. Student Perceptions of Efficacy-Based Practices and Factors that Contributed to A Successful Redesign of Online Introduction to Psychology

Manda Williamson, The University of Nebraska-Lincoln

The purpose of this course redesign was to determine the effect of efficacy-based teaching techniques in an on-line class on student success. Academic efficacy, not skill, is the greatest predictor of academic success, especially within the science disciplines (Pajares & Kranzler, 1995). Efficacy judgments arise from personal history of successes; modeling of others successfully executing a skill; verbal persuasion; and calm physiological states (Bandura, 1986). Because efficacy is learned, pedagogical models that foster student efficacy should produce persistence and promote course success (Webb & Barrett, 2014). Efficacy-based techniques that were used in the redesign include the following: backward design (Wiggins & McTighe, 2006); instructor presence: notes of deadlines, mentoring, video lessons (Bandura, 1986; Buskist & Saville, 2001); low-stakes quizzes in interactive text (Pajares & Kranzler, 1995b); practice tests (Solberg, et al, 1993); study guides (Twenge, 2009); student tutoring center (Solberg, et al, 1993). Survey variable predictors included The College Self Efficacy Inventory (CSEI); (Solberg, et al, 1993), and student perceptions of the efficacy practices. Outcome variables included test scores and D/F/W rates. Results (n=105) indicated moderate to large effect size differences between students' efficacy in the redesigned course compared to other course formats. Course practices that fostered success included instruction in effective study guide construction, practice exams and quizzes, and email encouragement. The single most impactful strategy used by instructors were those that fostered

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"students' perceptions that "my instructor was interested in my success". The course redesign successfully dropped D, F, W rates from a high of 44.6% to 15.7%.

103. Promoting Vocabulary Development for Meaningful Classroom Discussions

Ryan Yoder, Coastal Carolina University

Lower-level psychology courses are typically designed to introduce students to various fields of psychology, whereas upper-level courses often provide opportunities to explore research and applications within a particular field. Both levels require an understanding of field-specific vocabulary, and a common approach is to introduce students to this vocabulary with assigned readings and/or study guide completion. However, many students approach their workloads as economists, prioritizing those assignments that receive points and skipping those that do not. Indeed, our recent informal survey found that the most common reason(s) for this lack of reading/preparation were that 1) the students found the textbook to be boring and the terminology difficult to comprehend, and 2) the readings were not scored and therefore unnecessary for a passing grade. Here, we present a revised approach to homework assignments - outlining the chapter and completing a crossword puzzle - which explicitly requires students to develop the vocabulary skills necessary for meaningful classroom discussions. The appropriate grade weight was determined by varying this value across six sections of a course in order to determine the lowest weight where most students completed the assignments. Results suggest that 25% is the optimal weight for this assignment. Overall, this approach has been very effective at motivating students to complete the assigned readings before the relevant class meetings.