

6/20/2024 | 11:30 AM-12:30 PM, ET | Zoom 1

Opening Plenary: *COEURS 2.0*

Moderated by Lourdes E. Echegoyen

6/20/2024 | 1:00 PM - 2:00 PM, ET | Zoom 1

Presentation Type: Live "Share and Solve" or "Speed Dating" Presentations

1. STRATEGIZING THE FUTURE OF UNDERGRADUATE RESEARCH IN WORKPLACE DEVELOPMENT TO GROW STUDENT, PROGRAM, AND COMMUNITY

Track: Advocacy and Partnerships/Collaboration and Community

Dean Graeme Harper BA MLitt DCA Ph.D. FRGS FRSA FRAI (FRSM)

Oakland University, Rochester, MI, USA



Dean Graeme Harper

Brief Description

Workforce Development is a growing opportunity for all stakeholders in education and undergraduate research can play a key role in leveraging strategies to facilitate success. As we work to get our students ready for their future professions, we need to be preparing and implementing the best practices. This includes that in the kinds of blue-skies research academe can wonderfully accomplish, but also those aligning the needs of employers and communities to our disciplinary practices - in this way, directly exploring the connections between industry/community and institution; and ultimately aiming for the growth and sustenance of the we inhabit and serve, which in turn support us. This info-shop will discuss potential models for building and growing undergraduate research in the context of Workforce Development, considering how this bridge can be a path to diversity, equity, and inclusion as relationships are built between UGR and community through partnership and collaboration.

Key Takeaways

n/a

Audience Interest

Faculty Attendees, Undergraduate Research Program Director and Staff Attendees, Executive Leadership Attendees, On-campus Stakeholder Attendees (e.g., Honors Colleges, scholarships, fellowships, libraries, etc.)



2. Evaluating an Online Series of Courses for Undergraduate Researchers: Competency Gains and Perceptions

Track: Assessment, Accountability and Sustainability

Craig M Zywicki M.Ed., James J Sadler M.S.

Purdue University, West Lafayette, IN, USA

Brief Description

The Purdue University Office of Undergraduate Research (OUR) hosts a series of online courses for prospective and current undergraduate researchers. This session highlights how we evaluate these courses as a basis for quick sharing of alternate ways to evaluate course-based support of student researchers' knowledge and skill development. Through engagement in this session, participants will learn how we evaluate the series of online courses, then exchange ideas for their similar courses, and/or take away ideas adaptable to their institution.

Key Takeaways

Not applicable

Audience Interest

Undergraduate Research Program Director and Staff Attendees

Additional Author(s)

Amy L Childress

Layla Dang

Soyol Enkh-Amgalan

3. CURAM: Undergraduate Scientific Literacy Magazine – USC

Track: Structures and Models for Building and Growing Undergraduate Research

Ryan P Wisniewski

University of Southern California (USC), Los Angeles, CA, USA

Brief Description

CURAM is a magazine that transforms the high-end scientific literature into palatable, easy-to-understand articles. Each issue covers many relevant and adjacent fields, so no matter your interests, there is something for everybody. Each writer works with an artist to produce incredible pieces, bringing their vision to you. To see and learn more, join us in our session.



Key Takeaways

Not applicable

Audience Interest

Undergraduate Research Program Director and Staff Attendees, On-campus Stakeholder Attendees (e.g., Honors Colleges, scholarships, fellowships, libraries, etc.)

4. Chatbots in the Classroom

Track: Contributions to the Practice of Undergraduate Research

Dr. Cheryl A Bowers Ph.D.

University of Memphis, Memphis, TN, USA

Brief Description

Chatbots (e.g., Chat GPT) are among us. We can pretend they're not her or we can decide to make friends. This quick 10 minute session will highlight how an AI chatbot may be incorporated into an undergraduate research course. This session will include specific examples, and the audience will be encouraged to share prompts for demonstration with Chat GPT. Experiences from an undergraduate psychology research and statistics course will also be shared.

Key Takeaways

After attending this session, the audience should a) appreciate the use of artificial intelligence chatbots in research courses and b) be equipped to incorporate AI techniques in their research courses.

Audience Interest

Faculty Attendees, Undergraduate Research Program Director and Staff Attendees

5. Bridging Theory and Practice: Enhancing Career Readiness through Undergraduate Research

Track: Contributions to the Practice of Undergraduate Research

Nursah Yakut Ph.D. Student, Craig Zywicki M.Ed.

Purdue Univeristy, West Lafayette, IN, USA



Brief Description

Explore the transformative role of undergraduate research in developing career readiness competencies. This study will unveil key findings from a comprehensive study, integrating theories like Social Cognitive Theory with practical mentoring strategies.

Key Takeaways

not applicable

Audience Interest

Faculty Attendees, Undergraduate Research Program Director and Staff Attendees

6. A Basic Model for Retention Rates of Undergraduate Researchers: What's After Basic?

Track: Assessment, Accountability and Sustainability

Layla Dang Ph.D. candidate, Craig M Zywicki M.Ed., Dr. Amy L Childress Ph.D.

Purdue University, West Lafayette, IN, USA

Brief Description

Through engagement in this session, participants will learn the basic methods for merging UR experience data with institutional retention data, then share or receive ideas for moving beyond these basic rate comparisons to substantive explanations for the impact of UR experiences on students' persistence to graduation.

Key Takeaways

Not applicable

Audience Interest

Undergraduate Research Program Director and Staff Attendees, Executive Leadership Attendees, On-campus Stakeholder Attendees (e.g., Honors Colleges, scholarships, fellowships, libraries, etc.)

6/20/2024 | 1:00 PM - 2:00 PM, ET | Zoom 2

Track: Structures and Models for Building and Growing Undergraduate Research

Presentation Type: Live Oral Presentations

1. Implementing Agile Methods for Organizing Undergraduate Research

Program Coordinator Benjamin E Chaback M.S. Systems Engineering, Graduate Assistant Isabella Y DeLorenzo B.S. Engineering Physics

Embry-Riddle Aeronautical University, Daytona Beach, FL, USA



Benjamin E Chaback



Isabella Y DeLorenzo

Brief Description

Agile methods have long been used by the computer science and software fields for organizing teams and workflow. Higher education is another example of a network of closely interrelated teams that could benefit from adopting these methods. Through a combination of Agile and Scrum methodologies, the authors will introduce these methods, previous implementation strategies, a case study from the host institution, lessons learned, and implementation strategies for institutions looking to apply these theories to their undergraduate research offices.

Key Takeaways

Define what Agile Approaches are

Organize Undergraduate Research Offices Using Scrum Methodologies

Design Sustainable Systems Using Agile Approaches

Audience Interest

Undergraduate Research Program Director and Staff Attendees, Faculty Attendees

2. Creating Research Program-Linked Lab Courses to Expand Opportunities for Undergraduates

Associate Professor of Teaching Lou Roberts PhD

Worcester Polytechnic Institute, Worcester, MA, USA

Brief Description

Attendees will learn about a creative approach to increase the opportunities for undergraduates to participate in active research paradigms via instructional laboratory courses. The talk will balance the perspectives and goals of both the faculty and the students. How do we design a course at



the ever-motile leading edge of research? What are the strengths and limitations of this approach? How do we identify research projects that are both portable and feasible? How do we provide a mechanism to allow students to generate artifacts and currency? How do we facilitate students seeing themselves as participants in and contributors to sciences? This talk aims to stimulate faculty to think about these questions, and propose ways to expand the opportunities for undergraduates to participate in research. We see these questions and strategies as transcending our specific life science laboratory setting, and applicable to many of those in the CUR community.

Key Takeaways

Define existing frameworks for laboratory course instruction

Describe new approaches for engaging more students (particularly those from underrepresented backgrounds) in an authentic research process

Assess the feasibility of utilizing a research program-linked approach in your program

Audience Interest

Faculty Attendees, Undergraduate Research Program Director and Staff Attendees

Additional Author(s)

6/20/2024 | 1:00 PM - 2:00 PM, ET | Zoom 3

Track: Contributions to the Practice of Undergraduate Research

Presentation Type: Live Oral Presentations

1. How to Get Undergraduate Students Interested in Research

Dr Katie Morales PhD, RN, CNE, Dr Cynthia E Johnson PhD, RN, CHSE, Dr Nancy Capponi EdD, RN, CNE, CCRN-K, CEN

University of West Georgia, Carrollton, Ga, USA



Dr Katie Morales



Dr Cynthia E Johnson



Dr Nancy Capponi

Brief Description

We teach evidence-based practice and nursing research to undergraduate nursing students. Our goal is to promote evidence-based practices and build students' ability to effectively critique research. In this high impact practice designated course, students complete an evidence-based practice project. Projects typically include a poster presentation and paper, but can include capstone projects, supervised research, collaborative assignments, and service-based learning experiences.

However, our students are not typically interested in research. Therefore, we developed strategies to engage students based on adult and cognitive learning theories. Active pedagogy promotes deep learning through experiential learning, offering meaningful educational benefits and ensuring student success. Students learn by *doing* and *reflecting* as they connect classroom content to learning activities that stimulate academic inquiry and promote interdisciplinary learning, cultural awareness, leadership, and professional and intellectual skills. Students engage with faculty, respond to constructive feedback, network with professionals, and build a resume to market themselves for employment or graduate schools.

Key Takeaways

1. Describe essential features and elements of intentionally designed high-impact practices to engage students in research.
2. Consider additional methodologies to empower students to incorporate high practices.
3. Explore how high-impact practices to engage students in research can increase student learning and skill professional development.

Audience Interest

Faculty Attendees, On-campus Stakeholder Attendees (e.g., Honors Colleges, scholarships, fellowships, libraries, etc.)

Additional Author(s)

Dr Pam Dunagan PhD, RN, University of West Georgia, Carrollton, Ga, USA

2. The potential of student partnerships in the development of a research methods curriculum: The experience of co-designing “COMS 313 Communication Research Methods”

Dr. Maria V Guglietti (Cultural Mediations), Belen Tamariz-Martel Herrera (Communication Studies), Kaytlyn Turner (Communication Studies)

University of Calgary, Calgary, Alberta, Canada



Dr. Maria V Guglietti

Brief Description

In Summer 2023, the three authors of this presentation began collaborating on the curricular co-development of COMS 313, a class that introduces communication studies and film majors to social research methods. The partnership team, formed by a faculty member and two undergraduate students, developed and administered a survey to measure past students' experiences. More recently, the team has been working on new assignments that promote a student-centered approach based on the survey data collected. The new curriculum will be introduced in Fall 2024.

The aim of this presentation is to discuss the unique characteristics of student-faculty partnerships focused on curricular co-development, their benefits for both faculty and students, their potential as undergraduate research experiences, and the way they might contribute to a more diverse and student-centered future in undergraduate research education. The authors will offer audiences the chance to discuss potential implementation of partnerships in various disciplinary contexts.

Key Takeaways

After this presentation, the audience should be able to:

1. define a student/faculty partnership and differentiate it from other types of collaboration.
2. evaluate the potential contribution of a student/faculty partnership to the growth of undergraduate research education.
3. identify the practices and processes required to successfully implement a student/faculty partnership.



Audience Interest

Faculty Attendees, Undergraduate Research Program Director and Staff Attendees, Executive Leadership Attendees, On-campus Stakeholder Attendees (e.g., Honors Colleges, scholarships, fellowships, libraries, etc.)

6/20/2024 | 2:30 PM - 3:30 PM, ET | Zoom 1

Track: Structures and Models for Building and Growing Undergraduate Research

Presentation Type: Live Oral Presentations

1. Science Horizons at Lafayette College – Tool to Recruit and Retain Biology Students in STEM

Professor James R Dearworth PhD

Lafayette College, Easton, PA, USA



Professor James R Dearworth

Brief Description

Science Horizons is a program aimed at recruitment and retention of students in STEM, which the Biology Department at Lafayette College has been running for over decade. The program provides mentoring with opportunities for research experience to students in their first year of college. Since its inception, over 100 students have benefited from the program.

Key Takeaways

After attending this session, the audience should be able to design a program to recruit and retain biology students in STEM and be able to measure its success.

Audience Interest

Executive Leadership Attendees, Faculty Attendees, On-campus Stakeholder Attendees (e.g., Honors Colleges, scholarships, fellowships, libraries, etc.), Undergraduate Research Program Director and Staff Attendees

2. Quantifying the pipeline: A case study of how undergraduate research programs connect at Florida State University

B. Warren Oliver PhD (Candidate), David Montez MA, Dr. Michael David Franklin Ph.D.

Florid State University, Tallahassee, FL, USA



B. Warren Oliver

Brief Description

Undergraduate research is often defined within the larger context of high impact practices (HIPs) as educational practices which promote student engagement, retention, and persistence within students' academic programming. At Florida State University, we employ these HIPs across multiple programs which act as an introduction to these practices to students and a means of recruitment for other programs that use HIPs. FSU's HIP-related programs often utilize multiple HIPs through their core components and assignments, including internships, community-based learning and undergraduate research. This presentation will explore these programs as well as FSU's efficacy in connecting students to multiple HIP experiences. Additionally, this presentation will isolate relevant topics of how to guide students from other HIPs-oriented programming (such as global, service, or internship-based learning experiences) into undergraduate research. As a result, this presentation will help practitioners better situate students' experiences within the wider field of HIPs-practice.

Key Takeaways

- Evaluate and organize a diverse set of HIP-focused programs into an undergraduate research pipeline
- Define practices for using HIP-focused program activities to promote continued interest in undergraduate research and HIP-focused programs.
- Evaluate students' journey between HIP-focused programs.

Audience Interest

Undergraduate Research Program Director and Staff Attendees, On-campus Stakeholder Attendees (e.g., Honors Colleges, scholarships, fellowships, libraries, etc.)

3. On the RISE: Recruitment and Programs Supporting Faculty-Mentored Research

Ph.D Denisha M Parker Doctorate - Agriculture

Prairie View A&M University, Prairie View, TX, USA



Ph.D Denisha M Parker



Brief Description

Undergraduate Research is on the RISE! Many students understand that jobs and graduate schools want applicants to have undergraduate research experience. They often choose to check this box off in the summer when they have more free time. But what about the 9 months they have during the academic year? Here at Prairie View A&M University we want our students to look at undergraduate research as more than a box that must be checked off before you graduate. We instill in not only our students but also our faculty that undergraduate research fosters critical thinking, expand knowledge, build communities, and help define careers and personal interests. This is something that can be carried out all year long, not for just three months. To do this you have to implement three things: Faculty-centered recruitment, collaborative community, and student engagement.

Key Takeaways

- Design and execute a faculty-centered recruitment process that aids in increasing student retention.
- Foster a collaborative learning community between faculty and students through event organization.
- Increase engagement by highlighting student success.

Audience Interest

Undergraduate Research Program Director and Staff Attendees, Faculty Attendees

6/20/2024 | 2:30 PM - 3:30 PM, ET | Zoom 2

Track: Diversity, Equity, and Inclusion

Presentation Type: Live Oral Presentation

1. U@MNI: A Work-Study Program for Undergraduate Research

Katie Emery, Jane Kruskop

University of Michigan, Ann Arbor, MI, USA

Brief Description

U@MNI is a work-study research program funded by the Michigan Neuroscience Institute at the University of Michigan. We hope to share the design for our program to make undergraduate more accessible and provide undergraduate students with additional support to find success in a research setting.

Key Takeaways

1. Understand the financial limitations that may prohibit undergraduates from pursuing research experiences
2. Examine our design for undergraduate funding, participant selection criteria, faculty mentor selection criteria, and support seminar curriculum

Audience Interest

On-campus Stakeholder Attendees (e.g., Honors Colleges, scholarships, fellowships, libraries, etc.), Faculty Attendees, Executive Leadership Attendees, Undergraduate Research Program Director and Staff Attendees

Additional Author(s)

Maria Carmen Varela, Jacob Reeves, Marie Walicki, Reagen Speas, Julia Evanski, Courtney Myers, Rafael Hoyos Justiniano, Miriam Meisler, Paul Jenkins, Audrey Seasholtz, Keith Duncan

2. Changing the Face of STEM: Implementation Challenges and Benefits to Research Triads with a High School Student, an Undergraduate Student Mentor, and a Faculty Research Mentor through the EnvironMentors Program

Ms. Mary Ann V Smith MA, MA, MBA¹, Dr. Kathy Shaffer PhD²

¹Penn State Schuylkill, Schuylkill Haven, PA, USA. ²Penn State Shenango, Sharon, PA, USA





Ms. Mary Ann V Smith

Dr. Kathy Shaffer

Brief Description

The Global Council for Science and the Environment's EnvironMentors Program aims to increase the diversity of students in Science, Technology, Engineering, and Mathematics fields by engaging high school students from underrepresented backgrounds into research projects with university faculty mentors. At Penn State University, our version of the program includes an undergraduate research mentor in the partnership to create a "research triad" that works through an environmental research project over the course of an academic year. During our presentation, we will provide information about our implementation of the EnvironMentors program and have some participants talk about their experiences. Using the collected data, we will also report our student successes and diversity. Finally, we will illustrate how a program promoting diversity and mentoring can be developed for other content areas and implemented to improve student engagement in research experiences, while also helping to encourage current and upcoming groups of student researchers.

Key Takeaways

- Encourage ways for underrepresented students to participate in research
- Examine ideas for new ways to incorporate team building and mentoring into research
- Develop new program designs for engaging undergraduate and high school students in research

Audience Interest

Faculty Attendees, Undergraduate Research Program Director and Staff Attendees, On-campus Stakeholder Attendees (e.g., Honors Colleges, scholarships, fellowships, libraries, etc.)

6/20/2024 | 2:30 PM - 3:30 PM, ET | Zoom 3

Track: Assessment, Accountability and Sustainability

Presentation Type: Live Oral Presentations

1. Using mixed methods to assess impact and equity goals for an undergraduate research program: The OURA Lab

Dr. Courtney Ngai Ph.D., Dr. Rebekah LeMahieu Ph.D.

Colorado State University, Fort Collins, CO, USA



Dr. Courtney Ngai



Dr. Rebekah LeMahieu

Brief Description

The OURA Lab program was developed at Colorado State University to address identified barriers students encounter when engaging in undergraduate research. The primary barriers include having time to participate, compensation for participation, and awareness of available opportunities. The OURA Lab was designed following the tenets of culturally responsive pedagogy, and provides an adaptive, inclusive, and paid opportunity for students to gain valuable lab and research skills. In this presentation, we share our evaluation process and findings from four semesters of mixed methods data collection (N = 125). Evaluation was used to iteratively refine the OURA Lab each semester, and the data indicate that the OURA Lab successfully reduced barriers to entry by increasing students' research skills, confidence and belonging in lab spaces, and their likelihood of pursuing other research opportunities beyond the OURA Lab.

Key Takeaways

1. Describe how data collection and analysis were used to improve an undergraduate research program
1. Identify how evaluation may support the improvement of their own programs
1. Apply assessment strategies presented to their own programs

Audience Interest

Undergraduate Research Program Director and Staff Attendees, Faculty Attendees

Additional Author(s)

Dr. Louise Allen, Colorado State University

Jennifer Riley, Colorado State University



2. Measuring Success in Undergraduate Research Experiences (URE): A Comprehensive Analysis of Assessment Practices of UREs Across Disciplines

Dr. Fatima Mraiche

University of Alberta, Edmonton, Alberta, Canada

Brief Description

Despite buzz about undergraduate research experiences (UREs), key questions linger: What makes a URE truly impactful? How do programs measure URE success? What criteria guide evaluation? Despite numerous personal success stories advocating for UREs, there is a lack of systematic studies to comprehensively understand their assessment criteria for outcomes and skills. Our research takes on these questions by reviewing URE assessment practices and outcomes across diverse disciplines and formats. The goal of this session is to provide attendees with insights for measuring their URE success, to ensure students fully benefit from research involvement during their undergraduate studies.

Key Takeaways

- identify outcomes and key skills gained by students through participation in diverse URE formats and across various disciplines.
- appraise the strengths and limitations of various URE assessment strategies, considering factors like discipline, program format, and student characteristics.

Audience Interest

Faculty Attendees, Undergraduate Research Program Director and Staff Attendees

Additional Author(s)

Hilyatuz Zahroh, University of Alberta

Freyja Wang, University of Alberta

6/20/2024 | 4:00 PM - 5:00 PM, ET | Zoom 1

Track: Structures and Models for Building and Growing Undergraduate Research

Presentation Type: Live Oral Presentation

1. More Than Just a CUR: Departmental and Program Partnerships Turning a CUR Program into a Thriving Learning Center

Jonathan Lollar

Texas State University, San Marcos, Texas, USA



Jonathan Lollar

Brief Description

The Innovation, Discovery, Exploration, and Analysis (IDEA) Center at Texas State University is the central initiative for the Quality Enhancement Plan for our institution's current accreditation cycle with the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC). The IDEA Center was created to offer student development workshops, advice and guidance on applying for national fellowships and other external funding sources, and course-based, mentored research experiences for undergraduate students. We have since become a nascent—but thriving—student learning center. Student support is best facilitated through community and institutional partnerships, and our program is no exception. In line with the conference thread, Advocacy and Partnerships/Collaboration and Community, this session will highlight our student participation growth through department and graduate program partnerships. Currently, our program has key partnerships through three academic colleges, the academic success division, library, REUs, and four graduate degree programs.

Key Takeaways

After attending this session, the audience should be able to:

1. Initiate partnerships with common postsecondary programs—such as First-Year Experience courses—to advertise their program and to offer direct student support to a wider audience.
2. Understand what skills can be beneficial for students interested in research.
3. Initiate certification processes with two nationally-recognized mentoring/learning center/professional development organizations.

Audience Interest

Faculty Attendees, Undergraduate Research Program Director and Staff Attendees, On-campus Stakeholder Attendees (e.g., Honors Colleges, scholarships, fellowships, libraries, etc.)

Additional Author(s)

Dr. Peter Golato, Director, IDEA Center, Texas State University

2. Institutionalizing Course-Based Undergraduate Research Experiences (CUREs) at the University of Arizona: A Modified, Open-Access, CURE Training Institute Model

Courtney J Leligdon Professional Science Masters

University of Arizona, Tucson, AZ, USA



Courtney J Leligdon

Brief Description

Course-based Undergraduate Research Experiences (CUREs) are an effective way to offer authentic research experiences to students who may not otherwise be able to access them. The University of Arizona's (UAZ) annual CURE Training Institute (CURETI) provides information and resources to instructors for developing their course, and in 2023 was revamped in such a way that allowed more instructors across southern Arizona to access this information. The changes made were intended to institutionalize UR at UAZ and create accessible UR opportunities for students at all levels, of all backgrounds, and in any discipline. Currently, UAZ CUREs have the capacity to reach nearly 2,200 students each academic year. Through the development of introductory STEM labs into CUREs, collaborations with tribal and community colleges, and thorough assessment of student outcomes in CUREs, it is feasible to institutionalize CUREs such that potentially most undergraduates participate in research during their academic career.

Key Takeaways

- Recognize the importance of institutionalizing CUREs, particularly for underrepresented students
- Design a CURE Training Institute that promotes institutionalization of CUREs
- Examine the current status of CURE development at their institution and identify areas for improvement

Audience Interest

Faculty Attendees, Executive Leadership Attendees

Additional Author(s)

Kimberly Sierra-Cajas

3. Implementing and Assessing an Undergraduate Research Experience Curriculum

Academic Success and Enrichment Specialist Ashley L Ostroot PhD, Teaching and Learning Engagement Librarian Jane Hammons MSLIS

The Ohio State University, Columbus, OH, USA



Ashley L Ostroot



Jane Hammons

Brief Description

This proposal outlines the implementation and methods of assessment of a structured curriculum for a summer undergraduate research experience. The curriculum was first piloted in the summer of 2023 and data was collected from students over the summer using both direct and indirect assessment. While most of the literature on assessment of undergraduate research experiences utilizes indirect assessment through self-reporting, we argue that direct assessment is an important method for understanding the impact of undergraduate research experiences. Thus, we outline ways that undergraduate research offices can utilize direct assessment through the creation of learning outcomes, pre- and post-experience surveys, and a rubric for assessing whether students meet learning objectives. Developing a structured curriculum with clear program and student outcomes can support increased student learning related to the research experience, create a more cohesive experience for all students, and encourage closer connections between students and the program.

Key Takeaways

After attending this session, the audience should be able to identify additional ways that undergraduate research offices can facilitate learning and growth through supplementary curriculum offered as part of undergraduate research experiences.

After attending this session, the audience should be able to understand how undergraduate research experiences, particularly ones that offer supplementary curriculum or instruction, can be assessed through both indirect and direct assessment.

Audience Interest

Undergraduate Research Program Director and Staff Attendees

6/20/2024 | 4:00 PM - 5:00 PM, ET | Zoom 2

Track: Contributions to the Practice of Undergraduate Research

Presentation Type: Live Oral Presentations

1. Evaluating the Effectiveness of Traditional vs. Billboard-Style Poster Formats in Undergraduate Research Communication

Soyol Enkh-Amgalan Ph.D. Student, Layla Dang Ph.D. Candidate, Britney Ramos B.S.

Purdue University, West Lafayette, IN, USA

Brief Description

Join us for an exploration of poster presentation formats in undergraduate research. We'll examine and compare the effectiveness of traditional and billboard-style layouts (also known as #betterposters), shedding light on knowledge retention and audience experience. This session aims to provide practical insights for students and mentors, contributing to evidence-based practices in research communication.

Key Takeaways

1. Compare the effectiveness of traditional vs. billboard-style poster layouts
2. Apply evidence-based practices in designing conference posters

Audience Interest

Faculty Attendees, Undergraduate Research Program Director and Staff Attendees

2. Investigating Structure and Function of Biogenic Manganese Oxides: an example of collaborative chemistry undergraduate research

Dr. Kari L Stone Ph.D.

Lewis University, Romeoville, IL, USA



Dr. Kari L Stone

Brief Description

Utilizing collaboration between colleagues at different institution in support of the practice of chemistry undergraduate research will be presented.



Key Takeaways

Execute a proven strategy for advancement of undergraduate research progress.

Describe a tool for undergraduate research in under-resourced environments.

Audience Interest

Faculty Attendees



6/20/2024 | 4:00 PM - 5:00 PM, ET | Zoom 3

Track: Assessment, Accountability and Sustainability

Presentation Type: Live Oral Presentation

1. Fundamentals of Tracking and Reporting on Undergraduate Research

Craig M Zywicki M.Ed., Dr. Amy L Childress Ph.D.

Purdue University, West Lafayette, IN, USA

Brief Description

Knowing “What happened?” empowers “What’s next?” This session covers the fundamentals of tracking and reporting on undergraduate research experiences.

Best case scenario: You have a magical dataset with instantaneous reporting containing precise answers to all your stakeholders’ questions. If this is your situation, then this session is not for you. This session is for the rest of us struggling with issues in tracking and reporting.

Key Takeaways

Through engagement in this session, participants will:

1. Identify core purposes and key questions for reporting on URs.
2. Expose the essential UR data fields, how they are collected, and how they are used in institutional/program reporting.
3. Determine challenges and limitations of reporting.

Audience Interest

Undergraduate Research Program Director and Staff Attendees

2. Assessing Student Sense of Belonging as a Multifaceted Concept: Implications for Student Learning and Success

Lead Research Assistant Julian Crown B.A. in Sociology and Legal Studies, Senior Assessment Specialist Priscilla Sung Ph.D., Research Intern, Chancellor's Undergraduate Internship Program Regan Miller B.S. in Cognitive Psychology, Research Intern, Chancellor's Undergraduate Internship Program Janai Dagdagan B.A. in Intensive Psychology

University of California, Santa Cruz, Santa Cruz, CA, USA

Brief Description

What does it mean for students to feel that they belong at college, and does it really matter for their outcomes? In response to student focus group data (n=46) that highlighted sense of belonging as a complex and situation-specific construct, we developed and piloted a new survey measure that distinguishes between different aspects of belonging based on specific contexts (e.g. classroom versus section) and interpersonal relationships, which we call facets (e.g. professor versus peer). We collected student survey data from two large STEM courses (n=542) and found significant associations between belonging, engagement, and learning.



Interestingly, we found that feeling multifaceted belonging (two or more facets) yields additional learning benefits. Our results suggest that measuring distinct aspects of belonging in this way provides a more nuanced assessment of this complex phenomenon. This novel approach holds exciting potential for assessing student experiences in a variety of settings across campuses.

Key Takeaways

After attending the session, the audience should be able to...

- Define and identify some of the different facets and contexts that make up undergraduate students' sense of belonging
- Identify reasons why students' sense of belonging should be measured using specific facets or contexts of belonging and explain how and why these facets might be used to construct a measure of "overall belonging"
- Describe how students' sense of belonging, their participation in sections, and student learning outcomes are associated with one another, and the implications for student success

Audience Interest

Faculty Attendees, Undergraduate Research Program Director and Staff Attendees, On-campus Stakeholder Attendees (e.g., Honors Colleges, scholarships, fellowships, libraries, etc.)

Additional Author(s)

Juli Sofijski B.A. in Sociology. University of California, Santa Cruz

6/20/2024 | 5:00-5:45 PM, ET | Zoom 1
Division-Hosted End of Day Connections

6/21/2024 | 11:30 AM-12:30 PM, ET | Zoom 1

Plenary: *Faculty Attitudes and Behaviors: The Integration of Career Readiness Into the Curriculum*

Presented by: Mary Gatta, NACE

6/21/2024 | 1:00 PM - 2:00 PM, ET | Zoom 1

Track: Structures and Models for Building and Growing Undergraduate Research

Presentation Type: Live Oral Presentations

1. You said it, we heard it: How We Built Research-focused Classes

Dr. Yun J Kim Ph.D.

Emory University, Atlanta, GA, USA

Brief Description

Based on student feedback regarding learning goals and the understanding difficulties commonly experienced by humanities students, the linguistics program at Emory University has designed and implemented research-focused classes in its curriculum. This talk focuses on the development of the curriculum, the results of student feedback, and the outcomes of the students. The success of implementing research-focused classes in the Emory Linguistics program demonstrates the effectiveness of this approach, offering valuable insights and guidance for other institutions aiming to enhance research opportunities for their humanities students.

Key Takeaways

After attending this session, the audience should be able to design research-focused classes at their institutions.

Audience Interest

Undergraduate Research Program Director and Staff Attendees, Faculty Attendees

2. Modeling Major Inclusive Research in the Curriculum: Skill Development, Leadership, and Student Outcomes in an Mandatory CURE with an Elective Option for Advanced Research

Zachary Murphy

St. John Fisher University, NY, 14606, USA



Zachary Murphy



Brief Description

Join us for an academic journey in our Biology curriculum. All majors delve into the world of research through a mandatory Course-Based Undergraduate Research (CURE), introduction to research (IR), with an option to elevate their learning with an elective Advanced Research (AR) course.

Discover the intricacies of our courses as we unveil their structure, assessments, and outcomes. Our exciting approach integrates shared elements aligning with IR objectives, while giving instructors the freedom to introduce unique research projects. Students develop skills in techniques, information literacy, analysis, proposal writing, troubleshooting, communication, and ethical conduct.

In AR, not only do students build on these foundations, but they also take the lead among IR peers in a shared laboratory space. Facilitate discussions, provide feedback, and enhance their technical and career-oriented skills. AR students explore new horizons in career paths, networking, and funding mechanisms.

Key Takeaways

Envision a curriculum with an inclusive course that provides assessed outcomes related to research in a diversity of fields.

Understand how mandated research in a curriculum can enhance the student and faculty experience and provide further research opportunities without uncompensated responsibilities being placed on faculty.

Design a course-based undergraduate curriculum relevant to any discipline that allows for common assessments related to research preparedness.

Audience Interest

Faculty Attendees, Undergraduate Research Program Director and Staff Attendees

Additional Author(s)

Charly Campanella, Josh Morris, SJF Biology Department

3. Agreements, Contracts, or Compacts: Uncovering the Expected Learning in Mentor-Mentee Relationships

Nursah Yakut Ph.D. Student, Craig M Zywicki M.Ed.

Purdue University, West Lafayette, IN, USA

Brief Description

Establishing written expectations for the mentor-mentee relationship creates a shared understanding, yet the one-form-for-all eludes us. This presentation highlights our efforts to (1)



scrape literature and the web for mentoring agreements used in undergraduate research experiences to compile a comprehensive list of language used in prompts and arrange them thematically, and (2) evaluate our current learning agreement based on the responses to the prompts presently used.

Key Takeaways

Through engagement in this session, participants will:

1. Learn the broad range of content used in mentoring agreements.
1. Discover the thematic responses appearing within actual mentoring agreements from undergraduate research experiences.
1. Be able to apply this framework and results to mentoring agreements used in their programs.

Audience Interest

Undergraduate Research Program Director and Staff Attendees

6/21/2024 | 1:00 PM - 2:00 PM, ET | Zoom 2

Track: Contributions to the Practice of Undergraduate Research

Presentation Type: Live Oral Presentations

1. AI Powered Learning: Transforming Undergraduate Research

Mr. Justin L Rheubert M.Sc., Dr. Abby L Kalkstein Ph.D., Mr. Tom Knoedler MS

University of Findlay, Findlay, OH, USA



Mr. Justin L Rheubert



Dr. Abby L Kalkstein



Mr. Tom Knoedler

Brief Description

Implementation of artificial intelligence (AI) in the educational landscape has become a leading topic within higher education. Regardless of stance, AI will undoubtedly force educators to reconsider core learning objectives as tasks, skills, and responsibilities outside the realm of the learning objectives can be heavily supplemented by AI programs. We argue that undergraduate research is not immune to this discussion the that AI can be a beneficial additive to help undergraduate students focus on the core learning objectives of undergraduate research. The use and implementation of AI can lead to increased focus on the process of critical thinking, problem solving, and methodology, reduce/remove barriers and inequities, and change the dissemination landscape.

Key Takeaways

1. Evaluate objectives of undergraduate research and how AI may assist in student learning of objectives.
2. Examine how AI can be used to increase equity and inclusion in undergraduate research.
3. Explore how AI can be used in research dissemination.

Audience Interest

Faculty Attendees

2. Incorporating undergraduates into your research program

DR Joyce J Fernandes PhD¹, Dr Lance Barton PhD², Dr Irene Reed PhD³, Dr Joe Reczek PhD⁴

¹Miami University, Oxford, OH, USA. ²University of North Carolina, Charlotte, NC, USA.

³University of St Joseph, Hartford, CT, USA. ⁴Denison University, Granville, OH, USA



Brief Description

Graduate students and post-doctoral researchers rarely get an opportunity to learn about academic careers at primarily undergraduate institutions. Unfortunately, this leads many trainees to assume that such institutions do not offer their faculty productive and rewarding research careers. This workshop will provide trainees with first-hand experience from established faculty within such an institution, along with strategies for enhancing one's research program within the context of undergraduate teaching and mentoring. In addition, this workshop will provide trainees with information about sources of funding and other resources to support their research with undergraduates. They will also learn about resources available through the Council on Undergraduate Research as a professional organization.

Key Takeaways

As a result of attending this workshop participants will (1) become aware of strategies to integrate research into teaching mechanisms (2) gain knowledge of undergraduate research as a high impact practice in higher education (3) plan to seek opportunities during the post-doctoral and graduate training years to prepare for a career at a PUI (4) Learn about CUR as a resource

Audience Interest

Faculty Attendees



6/21/2024 | 1:00 PM - 2:00 PM, ET | Zoom 3

Track: Advocacy and Partnerships/Collaboration and Community

Presentation Type: Live Oral Presentations

1. Research Internships: Campus Partnerships to Connect Research Experiences to Career Development

Brandi Gilbert MPH

Indiana University Indianapolis, Indianapolis, IN, USA

Brief Description

The Life-Health Sciences Internship Program aims to be the first, but certainly not last, step in students' career journeys. Since 2007 we have supported over 1,000 sophomore and junior students in introductory-level paid research internships with our public research university's graduate and professional school faculty as internship hosts. As higher education comes under increased scrutiny on career outcomes for graduates, undergraduate research provides potential for students to build relevant skills, explore professional identity, and gain exposure to potential career options all without leaving campus.

Learn about how we support students with student-friendly recruiting terms, assistance with applications and interviewing, professional development opportunities, and planning for next steps after the internship. We connect with partners from across campus to ensure student success from application to post-internship; be prepared to think about who you might work with on your campus!

Key Takeaways

- Describe at least two ways to integrate career education into undergraduate research experiences.
- Develop a list of potential new partners to increase awareness or visibility of undergraduate research.

Audience Interest

Undergraduate Research Program Director and Staff Attendees

2. Maximizing undergraduate research and leadership in the American Association of Dental, Oral, and Craniofacial Research (AADOCR)

Rachel J. Kulchar

National Institute of Dental and Craniofacial Research, Bethesda, MD, USA

Brief Description

The American Association for Dental, Oral, and Craniofacial Research (AADOCR) is a premiere research organization that promotes driving forward health equity and achieving oral health for all. Strikingly, only 4% of all AADOCR students are undergraduates. There is a huge unexplored scope for these students to network and engage in leadership opportunities, poster competitions,

and personal development paths. Moreover, an active mission of the AADOCR is to promote diversity and participation from underrepresented minority groups. The aim of this session is to present anecdotes that highlight different ways in which undergraduate students can be involved in the AADOCR, as well as unique research pathways and opportunities for their clinical and research careers.

Key Takeaways

- Identify ways undergraduate students can engage with leadership and research opportunities within the AADOCR
- Develop interests toward graduate and professional programs that are focused on research careers in dental, oral, and craniofacial research

Audience Interest

Faculty Attendees, Undergraduate Research Program Director and Staff Attendees, Executive Leadership Attendees

3. Impact of Undergraduate Research-Centric Programming on Graduation and Retention Rates at a Public, Regional, Minority-Serving Institution

Jennifer J. Sherwood Ph.D., Ram Kandasamy Ph.D.

California State University, East Bay, Hayward, CA, USA



Jennifer J. Sherwood



Ram Kandasamy

Brief Description

Be a part of shaping the 'what's next' in undergraduate research and innovation! Cal State East Bay's Center for Student Research (CSR) is expanding its focus beyond research to support students engaging in scholarship and creative activities with faculty. Engage in discussions through our unique program lens at a public, regional, minority-serving institution. Explore exciting opportunities including collaboration with the Honors' College, federal funding possibilities, partnerships with nearby institutions, and fostering connections with local businesses.

Key Takeaways

Through attending this session, the audience will:

1. Engage in discussions through Cal State East Bay's Center for Student Research's (CSR) distinctive program lens, emphasizing exploration and innovation at a public, regional, minority-serving institution.

The logo for the 2024 Annual Conference features the word "CONNECTUR" in a bold, sans-serif font. The "C" is green, and the "O" is a colorful circular graphic with a central eye-like shape and radiating lines. The remaining letters "NNECTUR" are blue. Below the word is the text "2024 ANNUAL CONFERENCE" in a smaller, grey, sans-serif font.

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2. Explore exciting collaboration possibilities, including partnerships with the Honors' College, nearby institutions, and connections with local businesses for enriched academic and real-world experiences.
3. Learn about potential opportunities for federal funding, and providing extra resources to support student initiatives and projects.

Audience Interest

Undergraduate Research Program Director and Staff Attendees, On-campus Stakeholder Attendees (e.g., Honors Colleges, scholarships, fellowships, libraries, etc.)

6/21/2024 | 2:30 PM - 3:30 PM, ET | Zoom 1

Track: Structures and Models for Building and Growing Undergraduate Research

Presentation Type: Live Oral Presentation

1. Launching an Arts and Sciences Research Support Fund to Connect Undergraduate Researchers and Faculty Mentors

Dr. Scott J Warnock PhD, Dr. Ashley Dickinson PhD, Dr Christina Love PhD

Drexel University, Philadelphia, PA, USA



Dr. Scott J Warnock

Brief Description

We will discuss the successful launch of our interdisciplinary Arts & Sciences Undergraduate Student-Faculty Research Support Fund. We will describe the logistics involved with the start-up of this initiative, how the Fund operates, and our year-one triumphs and obstacles. The Fund provides undergraduates with \$1,500 for six months for three to five hours of research work per week under the direction of a faculty member from across our College of Arts & Sciences. For our initial Fall 2023 cohort, we had aimed for 20 students and ended up with 89 student applicants. We were able to match 19 of them with 10 faculty projects. We will discuss regular events we facilitate for the students, initial assessment efforts, and how we are working with our college's marketing/communications and development offices to build financial stability for the fund.

Key Takeaways

- 1) Develop an undergraduate research fund initiative
- 2) Describe to the administration on their campuses how such a program works
- 3) Strategize how to build a program for the long term.

Audience Interest

Undergraduate Research Program Director and Staff Attendees

2. Advocating for undergraduate research- leveraging your association with CUR

Dr Joyce J Fernandes Ph.D¹, Dr Lance Barton PhD², Dr Irene Reed Ph.D³, Dr Joe Reczek PhD⁴

¹Miami University, Oxford, OH, USA. ²University of North Carolina, Charlotte, NC, USA.

³University of St Joseph, Hartford, CT, USA. ⁴Denison University, Granville, Ohio, USA



Brief Description

As individuals who have engaged undergraduate students in research or worked in a capacity to promote undergraduate research in an academic environment, we are committed to creating opportunities for our students. As practitioners, we are always faced with situations that require us to be better advocates. This workshop will provide examples of effective strategies for advocacy from the perspectives of facilitators who are drawn from different disciplinary divisions of CUR. This workshop is designed to help individual practitioners understand how they can contribute to the strengths of the CUR community and network, while simultaneously benefiting from the support of like-minded practitioners in undergraduate research. The facilitated discussion will help attendees broaden their network, realize strengths, and identify potential collaborators to help them accomplish their goals for undergraduate research on their campus and in their communities.

Key Takeaways

After attending this session, the audience should be able to:

- Learn about successful advocacy initiatives at CUR member institutions
- Better understand how to develop the messaging and align the messaging with the appropriate audience
- access tools and resources through CUR to help them achieve professional goals related to undergraduate research
- Broaden their professional network in the service of undergraduate research

Audience Interest

Faculty Attendees, Undergraduate Research Program Director and Staff Attendees, Executive Leadership Attendees, On-campus Stakeholder Attendees (e.g., Honors Colleges, scholarships, fellowships, libraries, etc.)

Additional Author(s)

Sarah Johnson from Moravia will be an additional presenter. There was not a place to add a 5th author

6/21/2024 | 2:30 PM - 3:30 PM, ET | Zoom 2

Track: Contributions to the Practice of Undergraduate Research

Presentation Type: Live Oral Presentations

1. History of Gender Bias in Medicine and Social Media's Effect

Suhani Sharma

Westminster, USA

Brief Description

This presentation helps detail the history of gender bias in medicine and the use of social media in helping bring light to current problems with gender bias.

Key Takeaways

Describe and Analyze

Audience Interest

Undergraduate Research Program Director and Staff Attendees, Faculty Attendees

2. Applied Improvisation to Build Communication Skills in a Summer Undergraduate Research Program

Robert K Duncan PhD, Kate A Giffin MS, Bibi A Sulaman MS, Katherine L Furman MS

University of Michigan, Ann Arbor, MI, USA



Robert K Duncan

Brief Description

What do improv comedians and scientists have in common? More than one might think! Like improv comedians, scientists communicate with a wide range of audiences, which requires confidence, agility, approachability, and empathy. There are many didactic frameworks for teaching science communication, but most involve methods in crafting effective presentations to a rapt audience. However, our day-to-day scientific life is, at its heart, improvisational. In this presentation, we will explore methods and outcomes from an applied improvisation communication course implemented in NSF- and NIH-supported summer undergraduate research programs at the University of Michigan from 2019-2023.



Key Takeaways

- After attending this presentation, the audience will be able to define the general objectives of applied improvisation and how it is applied in academic settings.
- Attendees will be able to design an applied improv course for summer undergraduate research programs and create typical event structures.
- Attendees will understand the perceived value for communication skill development of an applied improv course based on four years of outcomes from implementing this course.

Audience Interest

Faculty Attendees, Undergraduate Research Program Director and Staff Attendees



6/21/2024 | 2:30 PM - 3:30 PM, ET | Zoom 3

Track: Advocacy and Partnerships/Collaboration and Community

Presentation Type: Live Oral Presentation

1. From Listener to Learner: A Podcast to Spark Research Connections

Jennifer Jarson¹, Kate Morgan²

¹Penn State University, Lehigh Valley, Center Valley, PA, USA. ²Penn State World Campus, State College, PA, USA

Brief Description

Multiple barriers contribute to undergraduates' lack of involvement in research including self-doubt, misperceptions about research, and naivete about resources. Furthermore, when we talk about research, we often focus on polished final products using specialized language which makes such experiences feel even more unattainable to students. In an effort to pull back the curtain, we created a podcast in which conversations with guests help us examine stereotypes and assumptions and normalize challenges and roadblocks related to research. By focusing on the *hows* and *whys*--not just the *whats*--of research, we are helping make processes and pathways more transparent. In this session, we will share takeaways that our podcasting experience affords for the future of undergraduate research: practices and attitudes central to research that we have uncovered with guests; storytelling as a tool for undergraduate research pedagogy and community building; and how podcasting can reveal and strengthen an institutional commitment to undergraduate research.

Key Takeaways

1. Identify how themes uncovered in a podcast relate to teaching and learning about research.
2. Consider the value of storytelling as a tool for undergraduate research pedagogy and community building.
3. Discuss how the podcasting format can be leveraged in support of pedagogical and institutional goals related to research.

Audience Interest

Faculty Attendees, Undergraduate Research Program Director and Staff Attendees, On-campus Stakeholder Attendees (e.g., Honors Colleges, scholarships, fellowships, libraries, etc.)

2. Communication Collaboration across Campus: The Power of Storytelling to Increase Alumni and Student Engagement

Ms. Wendy Pioquinto Master of Science

Florida State University, Tallahassee, FI, USA

Brief Description

Collaboration between campus partners has been documented to be an effective way to accomplish shared goals (Kaufmann et al. 2018). This presentation will provide examples of



different collaborative projects, including video, that aim to increase engagement with current students and alumni. The Center for Undergraduate Research and Academic Engagement (CRE) at Florida State University, in collaboration with Undergraduate Studies communications, University Communications, and the FSU Alumni Association, will showcase different tools with which alumni and student stories can be amplified to promote alumni and student engagement in the world of undergraduate research.

Key Takeaways

After this session, the audience will be able to identify campus partners with whom they can collaborate to amplify alumni and student voices and increase engagement.

After this session, the audience will have examples of collaborative projects and storytelling tools that facilitate the sharing of alumni and student undergraduate research stories.

Audience Interest

Undergraduate Research Program Director and Staff Attendees, On-campus Stakeholder Attendees (e.g., Honors Colleges, scholarships, fellowships, libraries, etc.), Faculty Attendees

Additional Author(s)

Hillary Speed

Jacey Darrah

Pre-Recorded Presentations

Expanding Undergraduate Research Involvement through Course-Based Experiences: Incorporating Research Skills in a Social Psychology Course

Track: Contributions to the Practice of Undergraduate Research

Dr. Emily Stark PhD

Minnesota State University, Mankato, Mankato, MN, USA



Dr. Emily Stark

Brief Description

This proposal describes a project that incorporated undergraduate research into a course assignment in an upper-level psychology course. Course-based undergraduate research projects are an effective way to introduce more students to the research process and build their research skills. In this presentation, I will describe this project, include both quantitative and qualitative evidence of the project's impact on students, and offer recommendations for how instructors can more effectively include research skills in course projects. These types of course assignments can help to increase the involvement of students in more advanced research experiences and are also useful for faculty with heavier teaching loads to still emphasize research practices.

Key Takeaways

*describe specific research skills relevant to course projects

*identify ways faculty can incorporate a robust research project into larger undergraduate courses

Audience Interest

Faculty Attendees

Implementing course-embedded undergraduate research in a single kinesiology course

Track: Structures and Models for Building and Growing Undergraduate Research

Dr Amber M Chelette Ph.D.¹, Dr. Robyn H Whitehead Psy.D.², Dr. Malcolm T Whitehead Ph.D¹,
Jasper J Sanford^{2,3}

¹Stephen F. Austin State University, Nacogdoches, TEXAS, USA. ²Stephen F. Austin State University, Nacogdoches, Texas, USA. ³Southern Arkansas University, Magnolia, Arkansas, USA

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Amber M Chelette



Robyn H Whitehead



Malcolm T Whitehead



Jasper J Sanford

Brief Description

Embedding undergraduate research experiences, such as CURE, within kinesiology courses proves to be a successful endeavor with notable benefits for students. The findings from two semesters of survey outcomes in the Survey of Undergraduate Research Experiences offer substantial backing for the ongoing integration of undergraduate research experiences for kinesiology students.

Key Takeaways

- The advantages of integrating CURE in a Kinesiology course
- Guidelines for initiating a CURE initiative in your curriculum
- Mitigating research apprehension
- Enhancing the probability of students pursuing advanced degrees

Audience Interest

Faculty Attendees, Undergraduate Research Program Director and Staff Attendees

Empowering Students in Interdisciplinary Research and Peer Mentoring

Track: Contributions to the Practice of Undergraduate Research

[Dr. Tsu-Ming Chiang Ph.D.](#), [Dr. Hasitha Mahabaduge Ph.D.](#)

Georgia College & State University, Milledgeville, GA, USA

Brief Description

The mentorship between faculty and students fosters numerous positive learning outcomes. High Impact Practices, including Undergraduate Research (UR), Senior Capstones, and Service Learning, enhance student retention and persistence to graduation. Past research highlights UR's role in developing critical thinking, problem-solving, and communication skills, crucial for competitive employment. Employers value recent graduates with diverse perspectives and effective communication skills. The demand for graduates skilled in cross-disciplinary communication accentuates the need for interdisciplinary research. This session proposes a bottom-up approach, shifting from traditional top-down faculty-led mentoring to empowering students in research initiation. A student-initiated, multidisciplinary Student Research Circle (SRC) encompassing STEM and humanities majors with consistent mentors. Acknowledging the workplace's teamwork focus, the initiative equips students with interpersonal and knowledge-sharing skills. The SRC model prepares students for collaborative, interdisciplinary work, inspiring



a new cohort of researchers by highlighting its impact on peer mentoring, interdisciplinary collaboration, and a supportive research community.

Key Takeaways

- Introduce a new interdisciplinary student-initiated peer mentoring program.
- Propose strategies for making the Student Research Circle (SRC) work.
- Discuss the strengths and limitations of the Student Research Circle.

Audience Interest

Faculty Attendees, Undergraduate Research Program Director and Staff Attendees, On-campus Stakeholder Attendees (e.g., Honors Colleges, scholarships, fellowships, libraries, etc.), Executive Leadership Attendees

Additional Author(s)

Integrating and Scaffolding Research into Undergraduate Curricula: Insights to Transformational Change

Track: Structures and Models for Building and Growing Undergraduate Research

Mitchell R Malachowski¹, Elizabeth L Ambos², Kerry K Karukstis³

¹University of San Diego, San Diego, CA, USA. ²Ambos Consulting, Washington, D.C., USA.

³Harvey Mudd College, Claremont, CA, USA

Brief Description

In this pre-recorded oral presentation, the principal investigators of the Council on Undergraduate Research (CUR) Transformations Project (NSF DUE#16-25354) will describe the backward design process of integrating and scaffolding undergraduate research experiences throughout the curriculum to provide research opportunities for all students. Over a six-year period, 24 departments from the disciplines of biology, chemistry, physics, and psychology at 12 institutions of all types pioneered this transformative approach to advancing the impact of undergraduate research. Using a mixed-methods case study design, we identified curricular, cultural, and organizational factors that support or hinder the transformational process. To enable the audience to achieve successful and sustainable research-rich curricula, we will describe several such influences including departmental and institutional culture, curricular structure, institutional agency, and assessment initiatives. These insights have been incorporated in an innovative theory of change that will provide a useful guide for other institutions to implement.

Key Takeaways

After attending this session, the audience should be able to:

- Articulate the reasons why a scaffolded approach to integrating research skills and experiences throughout a four-year curriculum provides all students with equitable access to the benefits of undergraduate research.

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- Identify the departmental and institutional factors that support and/or hinder the integration of research elements into the curriculum.
- Leave with practical approaches to create a departmental action plan that facilitates the scaffolding of research skills.

Audience Interest

Faculty Attendees, Undergraduate Research Program Director and Staff Attendees, Executive Leadership Attendees, On-campus Stakeholder Attendees (e.g., Honors Colleges, scholarships, fellowships, libraries, etc.)

Additional Author(s)

Jillian L Kinzie, Indiana University, Bloomington, IN, USA

Jeffrey M Osborn, The College of New Jersey, Ewing, NJ, USA

Creating Research Experiences for Underrepresented Undergraduate Students Through the U.S. Department of Education's McNair and Pathways Programs

Track: Diversity, Equity, and Inclusion

Katina R Stapleton PhD¹, ReShone Moore PhD², Carmen Gordon²

¹Institute of Education Sciences, U.S. Department of Education, Washington, DC, USA. ²Office of Postsecondary Education, U.S. Department of Education, Washington, DC, USA



Katina R Stapleton



ReShone Moore

Brief Description

This conference session showcases opportunities for undergraduate students to gain research experience through two U.S. Department of Education programs: the Office of Postsecondary Education's Ronald E. McNair Postbaccalaureate Achievement Program (McNair) and the Institute of Education Sciences' Pathways to the Education Sciences Research training program (Pathways). Both discretionary grant programs award funds to institutions of higher education to prepare students for doctoral study by engaging in research experiences, scholarly activities, and professional development. While program requirements differ, both Pathways and McNair have a shared goal increasing the attainment of Ph.D. degrees by students from underrepresented segments of society. During this oral presentation session, McNair and Pathways staff will provide overviews of the programs.



Key Takeaways

- After attending this session, the audience should be able to identify features of the McNair program.
- After attending this session, the audience should be able to identify features of the Pathways programs.
- After attending this session, the audience should be able to identify the U.S. Department of Education's funding opportunities for undergraduate research training.

Audience Interest

Faculty Attendees, Undergraduate Research Program Director and Staff Attendees

Students' perception on research and career-readiness competencies

Track: Assessment, Accountability and Sustainability

[Dr. Anastasia Smirnova PhD](#)

San Francisco State University, San Francisco, CA, USA

Brief Description

Mekolichick (2023) advocates the view of undergraduate research as a career-readiness tool, and proposes that the next step for undergraduate research programs should be to bridge research experiences and career-readiness competencies. As a step in this direction, we conducted a pilot focus group study with seniors in the College of Liberal and Creative Arts at San Francisco State on their experience with research and perception of career-readiness competencies. We found that (i) the perceived link between career-readiness competencies and research was not robust; (ii) students' view on individual career-readiness competencies varied, with communication, equity and inclusion, and teamwork perceived as highly relevant, and leadership and professionalism as less relevant. We propose that interventions and programming directed toward the development of career-readiness competencies needs to align with the needs and cultural values of the current generation of students (Twenge et al., 2012).

Key Takeaways

After attending this session, the audience should be able to (i) gain an understanding about career-readiness competencies and their relationship to undergraduate research; (ii) design focus groups to assess students' perception on various career-readiness competencies; (iii) brainstorm possible programming and interventions aimed at developing key career-readiness competencies among students.

Audience Interest

Faculty Attendees, Undergraduate Research Program Director and Staff Attendees, Executive Leadership Attendees

Additional Author(s)

Whitney K. Taylor



Elevating Student Voices through Inclusive Excellence in STEM Summer Research

Track: Diversity, Equity, and Inclusion

Dr. Jodi A. Schwarz PhD, Tom Pacio MFA, Dr. Jose Perillan PhD

Vassar College, Poughkeepsie, NY, USA

Brief Description

An institution embodies excellence only through a pervasive culture of inclusion -- an intellectual climate founded on the diversity of identities, backgrounds and perspectives of its members. This session will explore the design, implementation and assessment of a novel summer undergraduate research program to build capacity for inclusive excellence in STEM disciplines. In the Summer Catalyst Research Experience, students worked collaboratively with their peers, faculty, and staff to develop research questions on aspects of inclusion, access, and belonging in STEM fields. Within four years the pilot Catalyst program was fully integrated into an existing lab-based summer undergraduate STEM research program. The integration of inclusive excellence research into a traditional summer research program has allowed students to envision and create a scaffold to develop the inclusive STEM world they want and has empowered them to make lasting change in the STEM disciplines and communities at Vassar College.

Key Takeaways

Reflect on the influence of scientific culture and community on student belonging and success in STEM higher education.

Design approaches for building capacity for inclusive excellence in STEM summer undergraduate research programs.

Investigate current research practices and potential barriers between traditional research and inclusive excellence interventions.

Audience Interest

Faculty Attendees, Undergraduate Research Program Director and Staff Attendees, On-campus Stakeholder Attendees (e.g., Honors Colleges, scholarships, fellowships, libraries, etc.)