2022 Inaugural Florida PKAL Regional Network Meeting

Adapting to the Ever-Changing Higher Education Landscape

A Virtual Event Hosted by Stetson University

May 11, 2022

SCHEDULE

8:30 - 9:00 am, Eastern | CONFERENCE LOGIN

9:00 - 9:15 am | WELCOME AND OVERVIEW OF THE CONFERENCE

  ❖ Rosalie Richards, Associate Provost for Faculty Development; Professor of Chemistry and Education, Stetson University

9:15 - 9:45 am | KEYNOTE PRESENTATION

  "After the Pandemic: The Role of a PKAL Regional Network"

  ❖ Harry Price, Faculty Director Brown Center for Faculty Innovation and Excellence; Associate Professor Chemistry, Stetson University

9:45 - 10:00 am | BREAK

10:00 am - 12:00 pm | MORNING CONCURRENT SESSIONS

10:00 - 10:30 am | SESSION 1

  Course Design: Leveraging Pedagogical Tools and Technology to More Effectively Teach Students

  1. *OER in the Plague Years - Evolution of LibreTexts, a Major OER Platform*
     Joshua Halpern, LibreTexts author

  2. *Digging into the Real Numbers: Data Science as an Offering for Early College Students*
     Russ Olwell, Merrimack College

  3. *Designing Projects to Engage Students and Honor Their Learning Styles*
     Rebecca Streett, University of Arkansas Little Rock
10:30 - 11:00 am  
**SESSION 2**
*Faculty Development: Adaptation and Mentoring, and Tools to Help Students Cope*

1. *Allowing Your Teaching to Guide Your Research Pursuits and Finding Mentorship outside of One’s Departmental/Disciplinary Home*
   Kwame Owusu-Daaku, University of West Florida

11:00 - 11:30 am  
**SESSION 3**
*Course Design: Leveraging Pedagogical Tools and Technology to More Effectively Teach Students*

1. *Uncover | Play | Apply | Connect | Question | Realize: STEM Student Actions to Think Out Loud*
   Madeleine Chowdhury, Mesa Community College

2. *Integrate Technology in Course Materials to Teach Effectively in a COVID-19 Environment*
   Rui Gong, Mercer College

3. *Encouraging Academic Integrity by Reframing Exams*
   Erin Griesenauer, Eckerd College

11:30 am - 12:00 pm  
**SESSION 4**
*You Matter, and We Need You: Supporting the Teaching and Development of Contingent Faculty*

1. *Taking a “What Can Be” Strategy for Improving the Experience of Adjunct Faculty Members*
   Gypsy Denzine, Virginia Commonwealth University

2. *Creating Intentional Connections with Online Adjunct Faculty*
   Sabrina Walthall, Mercer University

12:00 - 1:00 pm  
**LUNCH**
*(A BREAKOUT ROOM WILL BE PROVIDED FOR CASUAL CONVERSATION)*

**FACILITATED SESSION FOR ADJUNCT FACULTY**
Facilitator: C. Ellen Washington, C2EW Leadership Consulting
1:00 - 1:30 pm  
**AFTERNOON CONCURRENT SESSIONS**

**SESSION 5**  
*Online Accessibility and Maintaining Student Engagement*

1. *What Was Learned during the Pandemic Regarding the Delivery of Accessible Online Courses*  
Sheryl Burgstahler, University of Washington

2. *Engaging Students and Encouraging Participation in Synchronous Online STEM Classes*  
Lucas Tambasco, Minerva University

3. *Leveraging Technology to Reach and Encourage Students to Review Course Material Over Academic Breaks*  
Carla van de Sande, Arizona State University

1:30 - 1:45 pm  
**BREAK**

1:45 - 2:25 pm  
**INVITED GUEST SPEAKER**  
*NSF Funding Opportunities*  
- Mary Crowe, Program Officer, Undergraduate Education (DUE) National Science Foundation (NSF); Professor of Biology, Florida Southern College

2:25 - 2:35 pm  
**ANNOUNCEMENTS**

2:35 - 3:30 pm  
**SPECIAL SESSION FOR FLORIDA FACULTY**  
*Creating and Sustaining a Regional Network -- Planning for the Future*
## SESSION INFORMATION

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KEYNOTE PRESENTATION
After the Pandemic: The Role of a PKAL Regional Network

9:15 - 9:45 AM

Dr. Harry Price has taught and conducted research with undergraduates since 1995. He received his BS in Biology and PhD in Chemistry from the University of Illinois at Chicago. As a postdoctoral fellow at Johns Hopkins School of Medicine, he carried out tropical disease research that focused on the development of drug resistance in the blood-borne parasite that causes African sleeping sickness in humans and related diseases in livestock.

As a faculty member at Stetson University, he has devoted his career to helping students realize their potential. He has been recognized for teaching excellence receiving two prestigious Stetson awards, the John Hague award (2011) and William Hugh McEniry award (2013), and the American Chemical Society’s Outstanding Teacher at a Four-Year College award (2011).

Since 2016, he has been actively involved in the Project Kaleidoscope Stem Leadership Institute (PKAL-SLI); first as a participant and then as a faculty coach/mentor supporting the annual PKAL-SLI institute. As part of a four-member coaching team formed in 2019, he coaches faculty from Historically Black Colleges and Universities (HBCU’s) engaged in leadership training as part of the NSF-funded Center for the Advancement of STEM Leadership (CASL) program. He credits his success as a coach and leader to the training he has received and continues to receive via the PKAL-SLI program. Training that allows him to engage in work in organizational dynamics, strategic planning, conflict resolution, interpersonal dynamics, team building, mental health and wellness as it relates to work-life balance, and equity, diversity and inclusion in teaching and leadership.

Currently, Dr. Price is serving as the faculty director for Stetson’s Brown Center for Faculty Innovation and Excellence. In this role he is tasked with representing the Brown Center, leading faculty development initiatives, and collaborating with partners across Stetson University to create professional development opportunities for faculty and teaching staff.

In his free time, he enjoys sitting in his backyard with his dogs Levi and Lily, working in his yard, listening to and playing music, cooking, and most of all, spending time with his wife and daughter.
INVITED SPECIAL GUEST SPEAKER

NSF Funding Opportunities

1:45 - 2:25 PM

Dr. Mary Crowe has over 30 years of experience in higher education. Prior to arriving in August 2020 as a rotating program officer within the Division of Undergraduate Education she was a Professor of Biology and the Associate Provost of Experiential Learning at Florida Southern College. In that role she oversaw many of the college’s offerings of high impact practices such as undergraduate research, study abroad, as well as the Teaching Learning and Center and the Honor’s program.

Dr. Crowe was the president of the Council of Undergraduate Research in 2012. Dr. Crowe served as the director of campus-wide Offices of Undergraduate Research at the University of North Carolina at Greensboro and Xavier University of Louisiana. Prior to taking on administrative roles, Dr. Crowe was a faculty member who taught, advised, and mentored undergraduate students in her research on the behavior of burrowing animals such as dung beetles and fiddler crabs.
SESSION 1-1.
**OER in the Plague Years - Evolution of LibreTexts, a Major OER Platform**
Joshua Halpern, LibreTexts author

This workshop will describe how LibreTexts, a large OER project, encountered and met the challenge of the plague years, growing its community, offerings and technology. Participants get a first, hands-on introduction to the system and learn how to start working with it. In the past two years community members have met the challenge of switching to distance learning using wiki based libraries, remixing, editing and creating custom courses. Collaborative text creation exploded. Key improvements were made in ancillary technologies including homework. A common platform allowed rapid introduction of new features. Ease of use by everyone, everywhere became the basic accessibility issue. That applies to making it as easy as possible for faculty to create and for students to reach and use materials that serve their training and needs. It was especially important to provide multiple channels for learner access. Books are available online, via printed books, embeddable into LMSs and can be mailed on an SD card as well housed in as a Raspberry Pi with a hotspot. It has been an intense and interesting two years.

SESSION 1-2.
**Digging into the Real Numbers: Data Science as an Offering for Early College students**
Russ Olwell, Merrimack College

Data Science has been a growing field in higher education, and a growing career field across many industries. While higher education institutions have created graduate degrees, majors and certificates for these programs, many young people know little about the field and the opportunities therein, particularly students from low-income and minoritized communities. To address these inequities as the field scales up, Merrimack College has offered an introductory data science class for students at Lawrence High School as part of its early college program. These students are in a standard introductory class alongside undergraduate peers, and complete all the same work, projects and presentations. Initial data indicate that students in the class gain a broader perspective on data science as a potential major and career field, and also are able to see more real world applications for their coursework. These factors would all argue for far more data science coursework offered at the high school/undergraduate level, particularly for students unlikely to be exposed to this field through family or community connections. Students and/or undergraduate teaching assistants will participate in this session as well to give their first-hand perspective.
SESSION 1-3.
Describing Projects to Engage Students and Honor Their Learning Styles
Rebecca Streett, University of Arkansas Little Rock

This session will examine strategies for designing engaging projects for first-year college students. Learn about methods and strategies that can easily be implemented into a variety of curricula, including evidence-based learning practices such as simple gamification techniques, scientific research skills, and “think, pair, share”-type interactions among students. Simple gamification techniques, such as allowing students to choose their own avatars and earn badges along the way, can be particularly effective at empowering students to problem-solve within their comfort zones by helping them make real connections between their work and the desired student learning outcomes, and building an inclusive environment that proves that a STEM education is about so much more than simple problem solving.

SESSION 2-1.
Allowing Your Teaching to Guide Your Research Pursuits and Finding Mentorship Outside of One’s Departmental/Disciplinary Home
Kwame Owusu-Daaku, University of West Florida

Graduating with my PhD from an R01 university with no robust models for or experience with engaging undergraduate students particularly in research, I felt very ill-equipped and underprepared at the beginning of my tenure track position at a regional comprehensive university. I was also coming from a geography department into an environmental science one which focused almost exclusively on geophysical processes and less so on the interactions of humans with such processes (my specialization). Hence, I felt very isolated and anxious about how I would thrive in my new departmental and disciplinary home. One thing I did know was that I loved to teach. So, I set myself to becoming the best teacher I could be, and in the process, I found avenues for research through coursework – particularly community-engaged coursework and directed/independent studies with students. I also used existing frameworks for assessing student learning gains (which I learned about through my PKAL network) to gather valuable information on student learning outcomes. Each of these three avenues – community-engaged coursework, directed/independent studies with students, and pre- and post-course surveys based on the Student Assessment of Learning Gains (SALG) survey, have yielded peer-reviewed publications and/or public-facing presentations. I also found multiple sources of mentorship for thriving in a non-R01 environment along the way, chief of which is the PKAL network and looking outside of my department to other departments such as Biology or the Honors program for mentorship, and disciplinary research areas such as education research. This session will highlight actionable steps for utilizing community-engaged coursework, directed/independent studies with students, pre- and post-course surveys, and seeking mentorship outside of one’s departmental or disciplinary home to chart a course for thriving in a non-R01 environment.
SESSION 3-1.
Uncover | Play | Apply | Connect | Question | Realize: STEM Student Actions to Think Out Loud
Madeleine Chowdhury, Mesa Community College

Studies of discourse are prevalent in mathematics education research, as are investigations on facilitating change in instructional practices that impact student attitudes toward mathematics. However, the literature has not sufficiently addressed the operationalization of the Commognitive Framework in the context of Calculus I, nor considered the inevitable impact on students’ attitudes of persistence, confidence, and enjoyment of mathematics. This study presents an innovation, founded, designed, and implemented, utilizing four frameworks. The overarching theory pivots to commognition, a theory that asserts communication is tantamount to thinking. Students experienced a Calculus I class grounded on four frames: a theoretical, a conceptual, a design pattern, and an analytical framework, which combined, engaged students in discursive practices. Multiple activities invited specific student actions: uncover, play, apply, connect, question, and realize, prompting calculus discourse. The study exploited a mixed-methods action research design that aimed to explore how discursive activities impact students’ understanding of the derivative and how and to what extent instructional practices impact students’ persistence, confidence, and enjoyment of calculus. This study offers a potential solution to a problem of practice that has long challenged practitioners and researchers—the persistence of Calculus I as a gatekeeper for Science, Technology, Engineering, and Mathematics (STEM). In this investigation it is suggested that Good and Ambitious Teaching practices, including asking students to explain their thinking and assigning group projects, positively impact students’ persistence, confidence, and enjoyment. Common calculus discourse among the experimental students, particularly discursive activities engaging word use and visual representations of the derivative, warrants further research for the pragmatic utility of the fine grain of a commognitive framework. For researchers the work provides a lens through which they can examine data resulting from the operationalization of multiple frameworks working in tandem. For practitioners, mathematical objects as discursive objects, allow for classrooms with readily observable outcomes.

SESSION 3-2.
Integrate Technology in Course Materials to Teach Effectively in a COVID-19 Environment
Rui Gong, Mercer College

To achieve the goal of teaching effectively, besides teaching strategies, course materials plays an important role in STEM teaching. Because of the Covid-19 pandemic, it has been difficult to teach students effectively by treating each student as an individual instead of having a one size fits all mindset because the amount of time used in verbal communication in and outside the class decreased significantly. To teach students effectively in new ways, the effective adjustments we made to our teaching mathematics and statistics include presenting material more clearly applied by diverse technologies, such as videos, Photoshop and Pearson, providing my students with the resources they need to become active learners and helping each student learn by meeting them at their levels in Zoom. In order to accommodate pandemic needs, the teacher’s responsibility of providing the students with the resources to succeed plays a more important role than before. We did integrate technology to make notes carefully and planned out to deliver the material clearly, with more well-thought-out examples in videos that illustrate the topics at hand. In addition, in our notes all main points and concepts were highlighted and explained by some examples developed by utilizing technology instead of using abstract definitions only. However, before Covid-19 our notes were succinct and fewer technology were included because students learned by communicating face to face.
SESSION 3-3.
Encouraging Academic Integrity by Reframing Exams
Erin Griesenauer, Eckerd College

This session will focus on an alternative to exams that gives students ownership of course material, makes room for student creativity, and encourages academic integrity by addressing motivation for academic dishonesty and making it more difficult for students to find answers online. I will share my experience replacing Calculus tests with more open-ended, student-constructed review projects: students are asked to review the main topics, write and answer their own “exam” questions, and reflect on their learning. These projects give clear insight into student learning. At the same time, the format of the project removes some of the common motivations for academic dishonesty by reducing student anxiety, increasing student feelings of agency, outlining clear expectations, and giving students multiple ways to engage with the material. It also makes it more difficult for students to use unauthorized resources because the topics included in the assignment are highly course specific: they must know what topics were covered in class during this specific unit, and which topics the instructor emphasized and framed as most important. Moreover, since students are creating their own questions and writing their own reflections, they cannot simply copy answers from online resources. Many students report enjoying these review projects and mention in their reflections the feeling that they have learned more than they would have with a traditional exam. I have found this type of project to be successful in both remote and in-person settings.

SESSION 4-1.
Taking a “What Can Be” Strategy for Improving the Experience of Adjunct Faculty Members
Gypsy Denzine, Virginia Commonwealth University

The plight of adjunct faculty is well known. Numerous articles have reported the number of adjunct faculty earning a wage below the poverty line in the United States. Poor working conditions have led to a drastic rise in adjunct faculty members unionizing during the last decade. Regrettably, adjunct faculty are often considered to be anonymous, exploitable, and disposable. One example of the adjunct faculty problem in higher education is the recent media frenzy surrounding one large public research university, who was called out for hiring adjuncts at a pay of zero dollars. That university claimed they were providing adjunct faculty the “privilege” of working and the opportunity to note their university affiliation on their resume instead of viewing adjunct faculty as a problem that needs to be solved, this session will draw upon core principles from an Appreciative Inquiry model (Cooperrider & Fry, 1990) and shift the goal to a “what can be” strategy. The session begins with participants individually writing down three things their institution is doing well in support of adjunct faculty, followed by a “three wishes” exercise. The opening exercise ends with participants identifying three values collectively held at their institution that can mobilize their “what can be” efforts. The presenter will share a case study of how her institution took a deliberate approach to increase support and opportunities for adjunct faculty. She will share the creation of a Provost’s Adjunct Faculty Fellow position, a new adjunct teaching award, a course cancellation stipend, and other resources. Examples of how teaching centers can support adjunct faculty will be provided, as well as tips for positively engaging adjunct faculty in shared governance. Drawing upon the construct of “ambient belonging”, examples of how we can make small and low-cost changes to send the message “you belong here” will be shared.
In online higher education, adjunct faculty members are an essential resource but unfortunately, they often feel isolated from the full-time faculty, administration, and staff. One way for higher education leadership to improve a sense of belonging for adjuncts is through the development of a strong online learning community which focuses on student learning, discipline relevant professional development, and active engagement with adjuncts. It is the role of leadership to create opportunities to connect adjunct faculty to the student learning environment by providing them with the tools and resources needed to deliver engaging online content. Workshops on the learning management system (LMS) being used, textbook representatives, platforms, and online management are essential for adjunct faculty to create an online classroom community of learning. To continue offering successful online courses, intentional professional development for adjuncts is needed. It should provide adjuncts with up to date information on online engagement, utilization of new apps or tools, and new methods of content presentations to students. Lastly intentional connection should include active engagement with adjuncts using virtual media for meetings and workshops while using digital media for communication and motivation. Given the impact of the pandemic, it is likely that online education is permanent and higher education leadership has to make the intentional effort to ensure adjunct faculty can thrive and be their best in virtual spaces.
SESSION 5-1.
What Was Learned During the Pandemic Regarding the Delivery of Accessible Online Courses
Sheryl Burgstahler, University of Washington

With their rush to move instruction at all levels online in response to the COVID-19 pandemic, some instructors and course designers have inadvertently left some students out of many learning opportunities because they have not employed well established inclusive practices, that include those underpinned by universal design (UD) principles. These students include some who have disabilities that impact their abilities to see, hear, move, learn, and engage. The content of this presentation provides a path forward in improving existing offerings and designing new ones that ensure that all students can benefit from online educational opportunities. Useful researchers for further learning will be shared.

SESSION 5-2.
Engaging Students and Encouraging Participation in Synchronous Online STEM Classes
Lucas Tambasco, Minerva University

Engaging students and promoting collaboration in classrooms have been among the most challenging aspects of the abrupt transition to online learning. Faculty around the world had to shift from synchronous live teaching to various forms of virtual classrooms where the class design did not map one-to-one. In order to provide a student experience that is crafted for virtual environments, classes have to be reimagined from the ground up, a shift that was generally not possible due to the short transition time. At our institution, which predates the beginning of the pandemic, we originally designed all of our classes to be conducted online synchronously following the principles of the science of learning. We aim to discuss the techniques that worked well in our STEM classes, focusing on how technology can provide an effective means of collaboration provided the class design and lesson plan are done intentionally. We will share how we have utilized breakout rooms, cold calling, and active discussions in Mathematics classes to create a classroom environment where collaboration is not only accepted, but expected. Among the challenges, we will brainstorm how to enhance student buy-in to this approach and how to nurture a sense of community where making mistakes becomes a natural part of the learning process, giving the students an opportunity to revisit and improve every time they contribute to the class discussion.
Students need and enjoy academic breaks, but they unfortunately lose valuable ground during these times off from formal instruction. This stagnation, or even worse loss of learning, over school breaks negatively impacts students of all ages across all subject areas, especially mathematics which is often taught in sequential courses that build on previously learned skills and concepts. But how can we stay connected with students over academic breaks and encourage them to engage in regularly rehearsing what they have learned? The Keep in School Shape (KiSS) Program was developed as an accessible, affordable, and empathic way to help students review material daily over academic breaks so that they better retain what they have learned in preparation for future coursework, while also gaining confidence in the belief that they can improve with effort. Through the KiSS Program, students receive links to daily review activities via text message or email. These links take students directly to the daily review activities that are housed in an online survey program. Each daily activity consists of multiple-choice problems that are supported by hints, solutions, encouraging feedback messages, and challenges so that mistakes can be viewed as opportunities for learning and challenges can be viewed as opportunities for growth. The KiSS Program is currently being offered over winter and summer breaks at a large southwestern university to bridge two sequential introductory mathematics courses, and hundreds of students have voluntarily participated in this easy to access, engaging, and encouraging program over recent years. This presentation describes the design of the KiSS Program and shows how students enthusiastically engage with this innovative review program. The presentation also describes how the KiSS Program could be adapted to help more of our students review course material regularly over academic breaks and gain confidence in their ability to improve with effort.