Florida Online INNOVATION SUMMIT

March 3, 2020
University of Central Florida, Orlando, FL

Registration & Continental Breakfast – 8:30AM – 9:00AM
Hallway

Welcome and Keynote – 9:00AM – 10:00AM
Ballroom A
Thomas Cavanagh, Vice-Provost, Division of Digital Learning, University of Central Florida

Digital Learning: The Path Ahead
Ballroom A
David A. Wiley, Chief Academic Officer of Lumen Learning

Dr. David Wiley is Chief Academic Officer of Lumen Learning, an organization dedicated to increasing student success, reinvigorating pedagogy, and improving the affordability of education through the adoption of open educational resources by schools, community and state colleges, and universities. He is also currently the Education Fellow at Creative Commons, an Ashoka Fellow, and adjunct faculty in Brigham Young University's graduate program in Instructional Psychology and Technology, where he is part of the Open Education Group (and was previously a tenured Associate Professor).

Concurrent Session 1 - 10:10AM – 11:00AM

Affordability Counts: Scaling Textbook Affordability Initiatives to Reduce Student Cost
Ballroom A
Christina Schettini and Gabriela Alvarez (Florida International University)

Short Abstract
This session will cover the impact of the Affordability Counts initiative, the obstacles of reducing textbook costs, and strategies and best practices for implementation. Upon completion of the session, participants will be able to develop a plan for launching a similar initiative at their respective institutions.

Extended Abstract
The Affordability Counts initiative was created by Florida International University (FIU) as a direct response to the increasing costs of textbooks in higher education. The program recognizes faculty who take steps in their courses to advance affordability across Florida state universities and colleges. In an effort to increase low-cost adoption, FIU developed a website with a searchable database of courses using Open Education Resources and low-cost materials. By Fall of 2019, FIU adoptions reached a total of 393 courses amongst 274 faculty members across the institution. Total cost savings reached an estimated $2 million in just the first running term for each course. After achieving significant gains in adoption within the institution, FIU began working with partner institutions in expanding the initiative across the state. By building a statewide repository based on common course codes, all faculty in the state university system now have access to low-cost course materials.

This session will cover the history and impact of the Affordability Counts initiative while providing helpful strategies for:
- Adoption of a similar program at attendee's respective institutions.
- How to overcome some of the challenges.
- How to implement a change management strategy for developing new courses with affordability in mind.
- How to collect data for reporting impact at their institution.

In-House Student Analytics on a Budget
Boardroom
Julian Levi Hernandez (formerly Florida State University), Mike Richards (Florida State University)

Short Abstract
Florida SU gets closer to analytics with predictive algorithms by using Open Source tools. From operations to development, we take you through our approach to an in-house data lake. We showcase use cases built with Machine Learning, where historical data is used to generate predictive data solutions.

Extended Abstract

Regardless of job title, a data steward faces the challenge of identifying sources, sanitizing records, and presenting solutions to clients. The Distance Learning department at FSU faced similar data challenges when asked to answer questions regarding student performance from data produced by the Learning Management System (LMS). In other situations, it was difficult to keep up with the vast number and size of logs produced by more than 20 servers, and to properly parse clickstream data. While considering the convenience of outsourcing the data mining process to outside vendors, the cost of software or professional services made it difficult to make it a reality.

Our data adventure to reshape the shelf life of internal records for proper data mining procedures begins in 2016. More than producing analytics on transactional data, we pushed our internal boundaries towards the mystic realm of Machine Learning methods to predict outcomes. With the usage of semi-structured and unstructured data, such as JSON, text, email, we are now able to convert string-based records into vectors that are friendly for statistics. At FSU, our department is the first on analyzing student-based performance from the LMS to provide predictive outcomes without external vendor platform for analytics.

The multi-facets of gathering, cleansing, loading, re-processing, and presenting data could not have been done without the help of Apache Open Software tools, such as Spark, Kafka, Impala, Sqoop, and Hive. The storage of raw, preprocessed, and final reports required a robust and unconventional Hadoop File System (HDFS). Please do not be intimidated by the tools, there are many ways to create a good pipeline; this is just a highlight of our complex data needs on a budget.

The impact on our campus begins with cost savings and improved decision making at our Testing Center facilities. The additional expected impact starts with the analysis of historical data and facilitates outcomes on every course on each semester. By curating student transactional records and converting them to numeric attributes, we can run daily processes to see the student progress and their forecasted outcome in the course.

Measuring student activity in a course, from the LMS standpoint, can be tricky. It would be perilous to use the predicted outcomes as true or false statements. Instead, the analysis and forecast of data in the LMS is a complimentary data set used by departments in charge of making a proper and final assessment of the student performance. Our current goal is to act as the warning system if a student fails to keep up with his/her peers in the same course.

The possibilities are endless when it comes to analyzing data on a budget. While we chose to implement a more robust data infrastructure in-house, it does not require an extremely large budget to find good information. With open source software, some commodity hardware, and basic technology skills, you may also be able to create an in-house solution while considering a large-scale platform

Examining Cyberbullying Policies for Online Learning
Ballroom C
Joey Raditch (University of Central Florida)

Short Abstract

As online education grows, there are additional opportunities for cyberbullying. This study examined policies regarding cyberbullying at all 12 Florida SUS institutions.

Extended Abstract

The cyberbullying phenomena has been recorded as affecting students and faculty alike in the K-12 and higher education systems. Cyberbullying in higher education has negative effects to the institution and its stakeholders, including faculty turn over and student suicide. While these responses are highly publicized, the effects of cyberbullying on the online classroom remain relatively untouched by researchers. There are very few resources available to faculty who teach online courses for creating strategies to combat cyberbullying in that context. Furthermore, many states, including Florida, defer conduct policies and their enforcement to the individual institution. While there are many aspects of cyberbullying within the online course in higher education that remain unexplored by research, this study seeks to breach the subject by analyzing the policies at Florida public universities. Using document analysis, this study analyzed policies from the 12 state universities capturing the definition of cyberbullying and recommended reporting practices for faculty on cyberbullying from each institution. By framing the results of the analysis through the community of inquiry, this study provides value to faculty seeking to strengthen their online teaching presence through providing clear guidelines established by each Florida institution.

Concurrent Session 2 - 11:10 am – noon

Taking Your Textbook Affordability Initiative from Awesome to OERsome!
Ballroom A
J. Cody Moyer (Polk State College), Anna Butler (Polk State College), Christen Shea (Polk State College)

Short Abstract

Learn to implement a quality OER initiative using a community of practice framework that partners faculty and professional staff for developing and adopting OER materials. By eliminating textbook costs, you provide access for students who could not otherwise afford to enroll.

Extended Abstract

This session addresses the issue of textbook affordability in higher education. The most recent survey of students by FLVC in 2018 noted 65% of students did not purchase the required textbook while 43% of students chose not to enroll in a course based on the cost of the textbook. These two factors have profound impact on enrollment and student success. This became a high priority for us as a college, serving primarily part-time, low

income students. Polk State College was a recipient of the Complete Florida OER Challenge Grant, which assisted in getting this project off the ground.

OER itself promotes innovation. Faculty are adopting, adapting, and developing materials to build a valuable course text that can supplant the former need of a purchased textbook. It allows for the instructor to choose materials that are current and most relative to their discipline, which provides a more meaningful experience for the student. Even those who adopt an open-source textbook are increasing their use of the LMS for all class formats, whereas previously they may not have used the LMS for a face-to-face course. The community of practice provides a conversation of innovation, allowing partnerships and dialogue to shape the experience. Each participant has the opportunity to share their project, the obstacles they had to overcame, and their solutions, which provide a framework for others participating in the conversation. The inclusion of library staff, learning technology, and the use of the teaching and learning innovation centers provides a multitude of resources to ensure quality and success.

Since beginning our OER initiative in 2017, we have developed 31 courses, impacting 6,912 students, providing an average savings of $74.00 per student; and an overall savings of $511,000.00. There were a few outlier courses, developed prior to 2017 by faculty on their own, contributing in small portions to this overall amount. The college has set a goal to reach one-million-dollars in student textbook savings by 2021. In addition, enrollment is impacted because students can see what courses offer OER materials prior to registration.

We are measuring the impact of the initiative through total cost savings, student success rates in OER courses vs. courses with a purchased textbook/access, and through enrollment data in the OER courses (number of sections offered, number of students enrolled, formats). We are also measuring the impact on other faculty, in terms of motivation level to develop or adopt their own OER materials and eliminate textbook cost. When OER courses fill first, pressure to move that direction becomes more prevalent.

Analytics Informed Interventions for Increased Student Engagement
Boardroom
Aisha Hamid (Florida International University), Jesse Blanchard (Florida International University)

Short Abstract
Comparing engagement data with grades, we were able to identify that students with more online engagement achieved higher grades. Attendees will learn an innovative strategy to increase the frequency of student engagement, diversify content, and increase knowledge retention.

Extended Abstract

Increasing student engagement in online coursework is a consistent concern for faculty and students logging in infrequently has negative consequences to knowledge retention. To address this issue, a close inspection of Canvas and Tableau analytics was undertaken. This review allowed us to determine how many pages students viewed and the number of interactions (i.e. discussion posts, assignment submissions, and messages). After comparing this engagement data in tandem with grades, a trend was identified. Students who had more engagement in the course scored higher overall. Moreover, current research supports these findings. "Spaced practice" indicates learning is optimized by repeated exposure and practice with content. Therefore, the task at hand was to design an innovative method to increase the frequency of student engagement and to diversify content delivery, thereby increasing students' knowledge retention and success.

To increase engagement frequency, an incentive in the form of time-restricted quiz questions and metered progress through each module was implemented. These quizzes were available for only 12-24 hours to encourage students to engage both significantly and frequently with the material on a regular basis. Considering the implicit flexibility of an online course, these quizzes took the form of extra credit to reward frequent engagement without penalizing students.

In an effort to provide fully online students more engaging and comprehensive content, we created in-field video lectures and field trips, which were available at no additional cost to students. The use of visual aids has been proven to make difficult concepts more tangible and memorable. This is particularly evident in the environmental sciences where practical classroom experiences (i.e. field trips and on-site lectures) have long been invaluable parts of collegiate education. This evidence-based strategy enhances instructor presence, supplements and/or replaces text while increasing student engagement.

These tools and techniques are also applicable to the traditional classroom setting. This endeavor has impacted the online learning experience in a way that ensures Florida International University (FIU) remains "Worlds Ahead" in meeting its objective to continually improve the quality of instruction for both residential and online students. These strategies were demonstrated to faculty and instructional designers at the 2019 FIU Online Conference with the intention of fostering faculty and department buy in. This presentation includes an overview of student feedback surveys evaluating the use of these strategies. Students reported higher levels of engagement and perceived faculty support and/or dedication to their learning. Engagement and grade data will also be compared amongst other offerings of the same course.

Instructors, educators, and instructional designers will leave this session with evidence-based approaches for student engagement, through incentivized exposure and in-field multimedia.

Instaeducator: Leveraging Instagram in Online Education
Ballroom C
Emily Wray (Full Sail)

Short Abstract
Social media offers educators new and exciting ways to engage with online students outside the LMS or virtual classroom. In this session we will explore how to use Instagram to humanize the online learning experience by sharing stories, lessons, and more about ourselves as educators.

Extended Abstract
Online learning is often criticized as isolating, impersonal, and less interactive than traditional face-to-face instruction. Online educators can mitigate these challenges by extending their reach and visibility beyond the LMS. Using social media, particularly Instagram, educators can create an extension of their classroom by fostering community with their students and other educational professionals in this virtual space. This is a no-cost solution that reaches students where they are already interacting.

This session will explore how educators, through strategic content development, can use the Instagram to supplement lessons and further facilitate discussion on a topic. We will also take a look at how the platform can be used to share stories and examples of assignments and projects. What's more, we will examine how educators can thoughtfully use hashtags to connect with likeminded individuals to create a vibrant community of practice and continue their own professional development.

Lunch - Noon – 1:00 pm
Hallway

Concurrent Session 3 - 1:10 pm – 2:00 pm

Adventures in Adaptive Learning in Elementary Spanish Language
Ballroom A
Anne Prucha (University of Central Florida), Kacie Tartt (University of Central Florida)

Short Abstract
Elementary Spanish Language and Civilization I and II courses were redesigned with Adaptive Learning and OER content to address various student needs and are currently being piloted. The presenters will discuss this innovative project and its impact on students, its plans for program-wide adoption, and preliminary data.

Extended Abstract
Elementary Spanish Language and Civilization I & II courses at University of Central Florida (UCF) were redesigned with Adaptive Learning and OER content to address

appropriate student placement, prior knowledge that students bring to these classes, and publisher textbook/LMS cost.

Our solution was innovative because the redesigned courses allow students to progress through the material at a pace and level that are comfortable for them and that reflects their actual prior knowledge. The use of OER resources allows faculty to curate and incorporate appropriate, relevant, and engaging content, and create and deliver meaningful practice and assessment.

Although the first course in the sequence assumes no knowledge of Spanish, many students have some prior knowledge of the language. The reasons for this are varied: (1) they took Spanish in school at some point before entering UCF; (2) they live in an area where Spanish is spoken (Miami, for example); and (3) they have family members who speak Spanish. With Adaptive Learning, students are provided with their own learning path and can focus on the concepts for which they need a stronger foundation. In the past, students have not been helped in this way, nor stimulated or motivated by publisher content. Using Adaptive Learning and OER content have allowed faculty to design the courses to be more personal, more appealing, and more meaningful to students.

Using Adaptive Learning tools allows faculty to monitor student progress more closely, and supplement where necessary. In turn, faculty can more successfully guide students based on the results generated by the Adaptive Learning application and help them with strategies for success. With publisher content and accompanying LMS, it was possible, but more limited and challenging to determine students' needs for individualized attention, and the class as a whole.

Often students view required Gen Ed courses as just "something to get through." Many students face challenges with the online delivery mode, either because it is new to them or because publisher content and LMS platforms are not user friendly or have technical problems and glitches that frustrate them. These obstacles negatively impact student DWF rates and their success and overall satisfaction. They also make it challenging for faculty to encourage students to continue in Spanish by pursuing a major or minor in the language. Another factor that impacts students' attitudes toward these courses is the cost of textbooks and LMS access. Using OER content and an Adaptive Learning application eliminates, or at least greatly reduces, costs to students.

To date, this project has impacted over 200 students who are enrolled in the courses that are piloting the redesign. We are working with administrators and fellow faculty to gradually roll out this redesign, which will impact over 3,000 students enrolled in Elementary Spanish courses annually at UCF.

Preliminary data gathered illustrate increased student mastery, decreased DWF rates, and more positive student perception of instruction surveys. Anecdotal student feedback is overwhelmingly positive and indicates that students feel more empowered of their learning.

Inclusivity & Rigor: How to Align Student Learning and Engagement
Boardroom
Lauren Kelley (Valencia College)

Short Abstract

This interactive and conversational session is intended to provoke the rethinking of inclusion and access by defining and reassessing the perceptions of academic rigor. More importantly, workshop participants are invited to engage in conversation about how academic rigor is defined, how it has shaped our understanding of the value of higher education, and its impact on student learning engagement and assessment. This session will provide participants with a model, tips, and tools for academic rigor that is inclusive and accessible for all learners.

Extended Abstract

What is academic rigor, really? If we stop and reflect, the concept of academic rigor has never truly been clearly defined. More importantly, it is unclear how students perceive academic rigor in their courses and academic programs or how their learning is assessed based upon this concept. Schultz, Drake, and Lessner (2013) surveyed 1,559 part and full-time faculty that revealed academic rigor was associated with the level of difficulty based on learning assessments throughout the semester and final examinations. Other research has suggested that the quantity of coursework dictates this concept and when students are unable to keep pace, course expectations are lowered; therefore, lessening academic rigor. These perceptions suggest a disconnect in the alignment of what academic rigor is believed to achieve and creating inclusive and accessible learning for all.

This lack of clarity in the argument of academic rigor has many implications for larger challenges and conversations that we are not having related to student learning engagement and assessment. More specifically, issues of access, equitable teaching practices and achievement gaps in higher education, according to Keller (2018) suggest a need to rethink the definition of academic rigor. Keller (2018) asserts that academic rigor should be defined as "deep, inquiry- and equity-based learning that supports students in achieving their full potential" (p. 90). In this conversational session, the definition of academic rigor will "acknowledge the critical role that the perspectives, life experiences, and backgrounds of all learners play in facilitating learning [which will not] exclude any students from the important work of integrating their life experiences and perspectives to interpret and apply academic content" (Quality Matters, 2019, p. 10). Further, Quality Matters (2019) asserts "a definition of academic rigor that facilitates learning for all students and can be applied across learning contexts is needed with ensuring institutional changes that will facilitate its success" (p. 10).

Lesson Plan: Workshop participants will begin the workshop with a prior assessment and revisit it as a post assessment:

Pre/Post assessment (polling/interactive activity):
- What is the purpose of higher education? What is the goal of a college education?
- What is academic rigor? How would you define it?
- How does rigor determine the value of higher education?
- When and how is academic rigor present? What does academic rigor look like?

Participants will explore an inclusive curriculum model with academic rigor, which will provide a teaching and learning practice that will encourage student learning and engagement. The tips and tools shared in this session will include:
- Timeline for faculty/student interaction
- Checklist of early alert indicators
- Prior assessment tool for gathering learning needs and preferences
- Development of teacher, learner and peer relationships
- Infusion of good habits and the development of other soft skills in learning outcomes, activities, and assessments
- Utilization of an effective teaching equation
- Teaching practice for sustainable and life-long learner engagement

Gallery Tour for Engaging Education
Ballroom C
Judy Somers (Florida Atlantic University), Maria Rotundo (Florida Atlantic University)

Short Abstract
This session offers a gallery style tour of a variety of unique projects designed to engage students while showcasing their learning. The Gallery tour will include a detailed program featuring the educational objectives and intent for each of the exhibits.

Extended Abstract
We always enjoy connecting with faculty who are interested in finding a different way for students to showcase their learning. Many of our faculty have such a positive attitude toward adding a new twist to their assignments and activities that it is a rewarding challenge to work together to develop new projects. The concept for this presentation is the result of one of those ideas generated in a lively discussion with a professor of French Literature. Her students will be creating a Gallery Tour of their literary creations throughout the semester as well as their final group video production of an original scene. This project came about because of her desire to avoid the dreaded (and often ineffective) final exam or paper. This presentation will feature components of her French Literature Gallery along with several other projects created with faculty across the university.

We will include a Health Administration faculty who uses Flipgrid for assignments involving student voice, an Education faculty's use of Photo Essay, a Criminal Justice faculty who shares how students can organize and deliver an effective political campaign with the potential to result in new legislation for school safety standards in

Florida, and a Literature professor who incorporates pseudo interviews with historical authors to provide perspective on time and place in literature.

The impact for the French Literature students is the opportunity to be fully engaged throughout the semester and come away with a solid grasp of the literary genres. She has created a rubric to assess the skills represented. Her students will also provide a reflection on the process. Each of the other projects include detailed rubrics as well as reflections on the process. Faculty passion for their topic combined with their genuine interest in student success results in engaged students who come away from their courses with deep knowledge and enthusiasm for the content.

Concurrent Session 4 - 2:10 pm – 3:00 pm

From Closed to Open Source: A Tour of UCFOpen (and All the Gritty Details In-between)
Ballroom A
Zachary Berry, Matthew Emond, Ian Turgeon, and Corey Peterson (all from University of Central Florida)

Short Abstract
The presenters will share the Center for Distributed Learning's open source initiatives that have enabled online teaching and learning efforts on campus and other institutions. Find out how you can use the same tools as well as join the open source movement.

Extended Abstract
UCF Open is the Center for Distributed Learning's new open source initiative featuring tools and applications built at the University of Central Florida (UCF). This presentation aims to give a brief history of development at UCF and the road towards open sourcing followed by a preview of some of the projects under the initiative. While we will touch on many of our tools during this presentation, we will be focusing on four tools.

> **UDOIT:** The Universal Design Online content Inspection Tool (UDOIT) was created with the goal to ensure more accessible courses for everyone. UDOIT is a self-service tool that scans your course, identifies possible accessibility issues, and allows you to repair some issues from within the tool. It is completely open source, and institutions using Instructure's Canvas can install an instance of UDOIT. Additionally, we've partnered with Cidi Labs to provide a hosted solution.

> **Due Date Changer:** One of many tools we've built designed to make faculty's lives easier. Due Date Changer allows faculty to quickly extend the deadline of assignments, making quick work of a rather tedious task. This has proven useful for unexpected school closures such as hurricanes.

> **Materia:** - our take on making online courses more engaging. Materia is a study tool and interactive game platform allowing faculty to easily create widgets, such as a labeling exercise, and drop it in their course. These widgets break up monotonous course text

content with a hands-on experience that can either be for practice or used as an assessment tool.

Obojobo: - our vision for reshaping online course content. Obojobo is a flexible content module creation and assessment platform. We've spent a good deal of time crafting a clean, easy to use user experience to replace the kitchen-sink approach of traditional online course content.

Our aim is to present these tools (and initiative) in the hopes that they could prove useful for other institutions, allowing us to be good stewards to the community at large. Potentially, we hope to inspire other schools to contribute to our project and inspire them to open source internal tools they have developed.

Crafting Interactive Video Lectures through PlayPosit
Boardroom

Brenda Such (University of Florida), Kellie Goughnour (University of Florida), Megan Podsiad (University of Florida)

Short Abstract

How can we design meaningful interactive lectures? In this presentation the University of Florida Center for Online Innovation and Production (COIP) will share the use of PlayPosit, an interactive learning platform allowing faculty to facilitate graded, adaptive video learning experiences through periodic questions, immediate discussion, and student space for note-taking.

Extended Abstract

The development of online education has coincided with the ability and ease for students to interact with video because video has often been credited as the piece that shares both knowledge and humanness to the perceived impersonal environment of the Internet. Higher education has poured millions of dollars into video production for its online courses, yet the student experience and student learning from video still remains a mystery (Poulin & Straut, 2017). Research, especially cognitive research, has been conducted related to videos in education showing that students tend to have an attention span of less than nine minutes for watch online videos. Also, students can retain more information if questions are interspersed throughout the video (Brame, 2017; Guo, Kim, & Robin, 2014; Szpunar, Khan, Schacter, 2013). However, more research and practice are required to facilitate interactions with online video content as it continues to evolve.

The University of Florida (UF) Center for Online Innovation and Production (COIP) piloted the use of the interactive video platform PlayPosit in 10 online courses during 2019 in hopes of providing students with a more all-inclusive, engaging learning experience. The platform allows faculty to create a composite video from multiple video sources and ask questions in traditional formats (e.g., multiple choice, short answer, fill in the blank) at various points, as well as allowing students to hold a discussion and annotate the video for personal note-taking. Additional accountability is afforded as the

students' interactions can also be synced with the course's learning management system gradebook. In general, the students have welcomed and requested for more interactive learning experiences with their online lectures. Moreover, the experience of building PlayPosit interactions within the videos has supported more critical conversations between COIP instructional designers and faculty members about the design and production of their lectures. The purpose of this presentation is to share the lessons learned from those conversations as efforts continue to create and monitor engagement through online videos.

Imparting Future Workforce Skills Using Virtualized Active Learning: A Case Study in an Engineering Core Course
Ballroom C

Ronald DeMara (University of Central Florida), Shea Silverman (University of Central Florida), Francisca Yonekura (University of Central Florida), Meghana Reddy-Vangala, (University of Central Florida), Mousam Hossain (University of Central Florida)

Short Abstract
A technology-enabled approach to advancing collaboration-based skills in STEM curricula was developed. This approach integrates virtual collaboration tools into the Canvas Learning Management System allowing laptops with Wi-Fi connections to facilitate team-based activities within any classroom space. Problem-based learning advancing teamwork becomes traceable, observable, and auto-graded, while sustaining the learner's engagement.

Extended Abstract
The ability to function effectively on multi-disciplinary teams has been recognized as a professional skill of increasing importance to the future workforce in Science, Technology, Engineering, and Mathematics (STEM) career fields [1]. However, an open challenge remains about how to integrate such teamwork experiences into the curriculum. Generally, the inclusion of more active learning exercises with student teams can provide one such option. This becomes especially feasible when lecture content is made available online or with video capture in a "flipped classroom," also known as mixed-mode or hybrid online/live delivery [2]. In such cases, more of the in-person face-to-face instructional seat time can be available to conduct learning activities which impart teamwork skills than curricula of the past where teamwork was constrained mostly to occur within capstone Senior Design courses [3][4].

In addition to allocating time for team-based active learning, an appropriate classroom environment is essential to conduct such activities. While offering features beyond traditional fixed stadium-seating classrooms, such recently-developed Collaborative Learning Spaces (CLSs), may unfortunately impart new scalability, cost, and scheduling demands. CLSs require dedicated rooms and furniture so that students can physically co-locate. Meanwhile, the instructor has difficulty observing more than one team at a time and traceability of student participation is lost. Also, each teams' submission requires manual grading which limits the scalability of delivery. Without technological

assistance, the instructor's capability to moderate, guide, and remediate learning activities in real-time can remain restricted [5].

To address these challenges, a Virtualized Active Learning (VAL) approach was developed for synchronous team-based problem solving. Specifically, a templating tool was created for the Canvas Learning Management System (LMS) called EtherMaker. EtherMaker creates distinct URLs to Etherpad links within a Canvas quiz which are accessed by the student Groups menu option. This tool realizes automated team formation/disbursement/coordination, and real-time auto-grading. Meanwhile, Mozilla's Etherpad realizes an interface for team members to discuss solutions with traceability of student participation via color-coded text highlighting and a timeline-based playback feature. The instructor can view each student's participation by accessing the Etherpad of each team to provide real-time feedback as necessary. EtherMaker is programmed in Python and uses the LTI standard that is built into the LMS for authentication. It also makes use of the Open Source project CanvasAPI [6] to automate the link and page creations for each student group. Prior to EtherMaker, links to each Etherpad session were created manually and balanced team formation was infeasible via Canvas-based delivery. Thus, EtherMaker improves online team-based learning activities from both instructor-facing and student-facing perspectives.

A pilot study during the Fall 2019 semester in a Computer Organization course with 69 students indicated positive results from VAL mechanisms. Specifically, this team-based active learning method provided worthwhile incentives for all learners to participate more fully, including peer teaching to assist others, as compared to conventional team activities. Due to traceability provided by VAL, teammates indicated that they were able to accurately and fairly crowdsource the most significant contributor while quickly reaching consensus on their technical design solution.

Closing Session - 3:10 pm – 4:00 pm

Perspectives on Adaptive Learning from Across the State
Ballroom A
Dr. Wendy Howard (University of Central Florida) Panel Moderator
Dr. Sarah Wyatt (Indian River State College) Mathematics
Pamela Thomas (University of Central Florida) Biology
Anne Prucha (University of Central Florida) Modern Languages
Kacie Tartt (University of Central Florida) Modern Languages
Jennifer M. Cainas (University of South Florida) Accounting

Digital content delivery doesn't have to de-personalize the instructional experience. This faculty panel will discuss adaptive learning at their institutions and how they personalized the student experience in their own courses in a diverse set of disciplines. We'll explore technology selection, pedagogical choices, success stories, and lessons learned.