Faculty Focus

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Strengthening Our Faculty

Dale Whittaker

Provost and Executive Vice President Dale Whittaker serves as UCF's second-highest ranking officer, providing academic leadership for UCF's 13 colleges, multiple campuses, and research centers and institutes. He joined UCF in August 2014 and is also Professor in the Department of Civil, Environmental, and Construction Engineering.

Nothing is more powerful than the opportunity to change so many lives, whether it's through teaching or research. That's why we are here, and it's what drives us at the start of each fall.

Since joining UCF a year ago, I have witnessed the incredible dedication of our faculty who every day strive to lift lives and livelihoods through the power of higher learning. Our faculty and staff make UCF a world-class institution, and I have often said that strengthening our faculty remains my No. 1 priority. That includes increasing the number of tenured and tenure-earning faculty members across all of our colleges and encouraging interdisciplinary collaboration focused on solving today's most challenging scientific and societal problems.

With performance funding from the state, UCF expects to hire 100 new faculty members over the course of this year, with the majority to start in 2016-17. This is in addition to the approximately 200 new faculty members who join us this fall—100 of whom were hired into newly created positions in every college, particularly in areas of high-enrollment growth and strategic emphasis, such as STEM. We were fortunate to hire the other 100 positions to fill vacancies from previous years.

By 2016-17, we expect to grow UCF's number of tenured and tenure-earning faculty by 25 percent—which, in turn, also helps increase our graduate enrollment and research funding.

About a third of our new hires for 2016-17 will be for interdisciplinary faculty clusters, created last year to encourage university-wide collaboration and scholarship, as well as build upon our unique areas of strength and strategic importance. Our six inaugural faculty clusters are cyber security, renewable energy, coastal systems, genomics and bioinformatics, intelligent prosthetics, and energy conversion and propulsion. I look forward to the great work from these clusters and am encouraged by the enthusiasm of all of our faculty members who submitted proposals in the first year.

Those returning to UCF this fall know we are poised for great things—new research opportunities, new industry partners, and new lives to teach and impact. To those new to our Knights family, "Welcome." You are joining UCF at an exciting time as we shape the future of what our 53-year-old university will look like entering its next 50 years!

Congratulations to the 2014–2015 Pegasus Award Winners:

Mohamed Abdel-Aty, College of Engineering and Computer Science

Humberto López Cruz, College of Arts and Humanities

Avelino J. Gonzalez, College of Engineering and Computer Science

Kerstinn Hamann, College of Sciences

Cynthia Y. Young, College of Sciences

Welcome Back!

Melody Bowdon

Melody is Executive Director of UCF's Karen L. Smith Faculty Center for Teaching and Learning and is a Professor in the Department of Writing and Rhetoric. She has been a faculty member at UCF since 1999.

Welcome to the 2015-2016 academic year. I hope you had a pleasant and productive summer. The Faculty Center staff has stayed busy these past few months working one-on-one with colleagues, hosting and co-hosting various events, and conducting research related to teaching and learning. We are here and ready to support you and your efforts in and beyond the classroom.

You may have heard that in the past year UCF has joined forces with other institutions around the state and nation to redouble our efforts to increase the quality and quantity of undergraduate degrees that come out of our institution. In the coming months and years, our university will build on a tradition of providing access and excellence by doing more than ever before to make the success of all students our highest priority. In the Faculty Center, we will offer workshops, book clubs, and guest presentations that will provide faculty members with training and support needed to accomplish the goal of helping our students to learn what it takes to succeed in the college classroom and in whatever they choose to do next.

Related efforts and activities will include:

- A co-hosted fall event that will address issues of civility in the classroom and the campus environment.
- Collaborative efforts to help faculty teams to define student success markers throughout the semester and point struggling students to existing and new campus support measures.
- A cross-campus effort to discover effective strategies to help faculty members to better plan and track their professional development activities and efforts.
- A Scholarship of Teaching and Learning Academy, a yearlong workshop series that will engage 10-15 faculty members in reflective practice and inquiry related to teaching.
- A spring Writing a Journal Article in Twelve Weeks faculty development cohort with an emphasis on connecting research and teaching.

This welcome back issue of the Faculty Focus contains a number of articles that align with the student success emphasis. Liz Grauerholz's piece describes the benefits and drawbacks of an experimental assessment model she's used recently in a course with the goal of increasing students' sense of responsibility for their own learning. Faculty members Karin Chumbimuni-Torres, Christa Diercksen, Alisha Janowsky, Keri Watson, and Danielle Webster describe strategies they've developed to increase student engagement in their large enrollment classes. This includes virtual laboratories, video games, targeted email messages to struggling students, innovative in-class demonstrations, and peer teaching strategies. We've also included a brief article by a representative of one of the classroom response tool (clicker) vendors who participated in our summer Teaching and Learning Day Click Off. Similar articles from reps of other companies will follow throughout the year.

This issue also features practical advice from this year's Chuck Dzubian online teaching award winner, Beatriz Reyes-Foster; faculty perspectives on the STEM-Non-STEM debate provided by Dan Murphree; and an example of ways in which faculty members can cross disciplinary divides in coursework as suggested by JD Applen and Sonia Stephens.

Later in the issue we welcome Karen Morrison, UCF's new Chief Diversity Officer, and Anthony Jenkins, Senior Associate Vice President and Dean of Students for Student Development and Enrollment Services, who both joined the UCF team last year. They share with faculty their perspectives on UCF and their visions for helping the institution to move forward.

In the final section of the issue, Paul Whalen, President of the UCF Graduate Student Association, describes his plans for the organization and suggests ways in which faculty members can get involved to help improve graduate students' chances for success in and beyond their academic programs.

On the last page of this volume you'll find information about upcoming fall activities as well as a reminder to review critical policies that affect faculty members. Of course there will be much more happening at the Faculty Center and beyond than we've listed, and we hope that you will join us in a variety of activities that will enrich your professional experience. Later this fall the university will kick off our new campus Quality Enhancement Plan, which will provide faculty members with yet another avenue to get involved with activities that synergistically improve their own professional experiences and their classroom efforts. The Faculty Center team and I look forward to another great year with you.

Encouraging Responsibility for Learning

Liz Grauerholz

Liz Grauerholz is Professor of Sociology and Dean's Fellow for the College of Sciences. She has been active in the Scholarship of Teaching and Learning movement for several decades and is former editor of *Teaching Sociology*, a SoTL journal published by the American Sociological Association.

Years ago, I came across Maryellen Weimer's 2002 book, *Learner-Centered Teaching*, and became intrigued by her ideas regarding ways to encourage greater engagement and students' responsibility for their own learning. I shared her belief that too many of our students passively move through courses, never really challenged to be independent learners prepared for life-long learning. Weimer suggests one way to encourage greater responsibility for one's own learning is to allow students greater decision making about course activities and assignments. I took her advice and implemented this approach in several courses. Here I'll describe how I restructured my online Family Trends course in such a way that students can choose different assignments in order to satisfy learning goals and the results from an assessment I conducted of students' learning outcomes. The results were encouraging, and I hope it inspires others to explore this option for enhancing students' engagement and learning.

First, I structured the course entirely around points and allowed students to accumulate points in a variety of ways (quizzes, papers, discussions). Each module contained lots of choices for students. For example, one student could take 6 multiple choice quizzes, 2 short answer quizzes, 1 paper and participate in 7 modules' discussions and earn an A, while another could write 6 papers, take 7 short answer quizzes, and participate in 7 modules' discussions. If students were actually to complete all the assignments, they could earn over 1600 points, but they were still graded on a 1000 point scale (e.g., accumulating 935 or more would result in an A). It also meant that students could "bomb" a quiz or writing assignment and it wouldn't harm their grade too much (assuming it wasn't a pattern); they could simply earn points on other assignments.

Last summer I asked students to provide anonymous feedback in order to assess a variety of learning outcomes. I was pleasantly surprised to find that students reported greater responsibility for their own learning (90% agreed that they felt like they were in charge of their own learning) and more engagement with the material (66% agreed that they felt more engaged with the material because of the point-system). One student wrote: "I absolutely LOVED the point-system. It made me feel like I had control over my learning and gave me the freedom to pace myself the way I felt more comfortable….[the course] made me feel like an adult taking charge of my own education while at the same time allowing me to decide whether I wanted to challenge myself or not with the assignments I am not the strongest at."

There were other, unexpected outcomes. For instance, I was hopeful that the course structure would allow students to try more challenging assignments (and therefore improve their skills) because the stakes were lower, and that appears to have been the case. I asked students if they avoided certain challenges because they had options, or took the opportunity to work through challenging assignments because there was lower risk. Twenty-five percent stated that they took on more challenges, 65% said they did "A little of both" and only 10% said they avoided certain challenges. This structure seems to give students permission to make mistakes, which is critical to learning.

One concern I had was that students would not be motivated to put forth effort if they knew they could make up points doing other assignments. But 86% agreed that they were motivated to work hard in the course, 76% disagreed that they "spent less time on papers than I normally would because of the point grading system" and 71% disagreed that they spent less time preparing for online quizzes. Another concern was that students might be confused by all the assignments, but all agreed that "they clearly understood how the point-system worked and just 8% agreed that "There were so many options/choices, I was unclear what needed to be done to fulfill course requirements."

I did encounter several challenges. For one, it was very difficult to get students to grasp the point-system. They wanted to convert grades into percentages and it didn't help that Canvas allows instructors to list final grades as points but it still calculates percentages within types of assignments. There was also much more grading on my end. Many students took advantage of the options available, including writing assignments, so I found myself grading more of these than I do in other types of courses.

I am also left with some unanswered questions. Does this structure disadvantage students who need more structure? A few students (who probably didn't respond to my questions) did fall behind. Perhaps they thought they could put off assignments until the end and then either couldn't earn a sufficient number of points or just got overwhelmed? I've also wondered if the approach encourages a consumerist mentality in students—sort of a "pick and choose what you want" approach to education. There are undoubtedly larger forces at work in higher education that contribute to this perception, but that is a possible drawback.

Despite these challenges and questions, I think the approach has much promise for improving students' learning experience and helping them take greater responsibility for their education. If it helps students become more aware of the role they must play in learning both in college and beyond, it's worth it.

Increasing Student Engagement in Large Classes

Christa Diercksen (Biology), Karin Chumbimuni-Torres (Chemistry), Danielle Webster (Health Sciences), Keri Watson (School of Visual Arts and Design), Alisha Janowsky (Psychology, not pictured)

These faculty members met monthly throughout the spring 2015 semester at the Faculty Center and collaborated to develop models for promoting student success.

Active, engaging, and learner-centered teaching has been shown to foster higher long-term information retention than traditional professor-centered lectures (Bonwell and Eison 1991). When teaching large survey-style classes, this can be particularly difficult, but many faculty still want to create a learning environment that is personal and interactive (Carbone, 1998). Instructors want to get to know their students, and they want to provide them with opportunities to get to know them and one another (Phillips, 2008). But how can faculty who teach large classes create learner-centered environments and foster interpersonal relationships with their students? Whether in person or online, in the laboratory or lecture hall, faculty can increase student interaction and engagement. This article discusses a variety of techniques and strategies employed by faculty in the College of Sciences, the College of Arts and Humanities, and the College of Health and Public Affairs that can be used to facilitate student-to-content, student-to-student, and student-to-faculty interaction in large classes.

Christa Diercksen, Biology

Imagine you are a first-year student, and it is the first day of your General Biology I class. You walk into the lecture hall, and, like in many introductory classes at UCF, you are faced with a sea of student faces while your instructor stands on a stage in the front of the room. It is easy to understand why this arrangement, although necessary due to the number of students who must take General Biology I (approximately 2,000 undergraduates per semester), is daunting and intimidating to students. General Biology I, or BSC 2010C, also has a required laboratory component, which one might think could allow for more personal attention and interaction than the lecture, but again, the number of students necessitates that these labs have forty-eight students per section. Labs are taught by two graduate or undergraduate teaching assistants, so do not allow for much personal attention. Moving so many students through the labs not only strains the available TA resources, but also monopolizes two large laboratory spaces in the biology building Tuesdays through Fridays. Because of their size, these labs reduce the lab experience from "hands on" to a space for worksheets and recitation. Furthermore, the resources directed towards BSC 2010C prevent the expansion and development of upper-level biology labs.

Faced with this scenario, the biology faculty decided to **explore the use of the online virtual world platform Second Life**. Chant Newall Development Group, in partnership with Pearson Education, developed Second Life Biology I labs for UCF. These labs occur on an "island" within Second Life, where students and TAs, via their avatars, conduct experiments. The labs merge educational content and a gaming environment to engage students, and the online platform allows students to explore topics that are difficult to cover in face-to-face labs. For instance, the genetics lab allows students to "interview" aliens after crash landing on a distant planet. In addition to enhancing engagement and facilitating the coverage of interesting topics, the Second Life platform also increases student-to-faculty engagement by making it possible to hold virtual office hours and review sessions—a necessity when there are limited spaces that can handle large numbers of students outside of scheduled class times.

The Second Life labs have provided a solution to several of the logistical issues associated with the large number of students who need to take General Biology I. It has opened up a whole new realm of possibility for the content in the labs, and it has provided a space to conduct reviews and help sessions. In pilot studies, students in online labs performed as well as or better than students in face-to-face labs, and once they became familiar with the platform, many students reported feeling more connected to the labs, to their TAs, and to their peers. This encouraging preliminary data led to all General Biology I labs in Spring 2015 being offered online in Second Life. While this new lab format is still being perfected, the use of Second Life for labs has demonstrated increased student-to-content, student-to-student, and student-to-faculty interaction over traditional face-to-face labs and has helped the Biology Department overcome limitations of time and space.

Keri Watson, Art History

To accommodate large numbers of students and limited classroom space, some art history courses in the School of Visual Arts and Design are being offered online and mixed mode. One such course, ARH 4450: 20th-Century Art, was offered mixed mode in Spring 2015. The class of sixty students met for an hour and fifteen minutes once a week, with the remainder of the content covered online. For the online portion of the course, Assistant Professor of Art History Keri Watson and Assistant Professor of Digital Media Anastasia Salter **created a game, "Secret Societies of the Avant-garde," in which students worked in teams to identify and interpret art objects**. The twentieth century is marked by numerous styles and movements, and the game was designed to illustrate this dynamism as well as to teach visual literacy and teamwork, key skills for the twenty-first century. Games, play, and interactivity have had a significant role in modern and contemporary art movements such as Dada, Surrealism, Fluxus, and Conceptualism, and the game modeled this aspect of modern art while also teaching skills of close looking and critical analysis. In the game, teams received clues, had to collaboratively write papers that analyzed and interpreted works of art, and curated online exhibitions that incorporated the various movements covered over the semester. Use of the game, which was delivered through Webcourses, allowed more material to be covered more deeply than traditional content delivery methods and fostered the development of interpersonal relationships, thereby increasing student-to-content and student-to-student interaction.

Alisha Janowsky, Psychology

Increasing student-to-faculty interaction in large classes can be particularly challenging, but technology offers tools to help facilitate exchanges. In the College of Sciences, Alisha Janowsky, Assistant Chair and Director of the Undergraduate Program in Psychology, **uses the "Message Students Tool" in Webcourses to interact with students and personalize feedback** in Statistical Methods in Psychology (PSY 3204C), a face-to-face psychology class of 360 students. Here's how it works: In Webcourses' Gradebook, click on the dropdown menu for an assignment. Select "message students who…". You then have several options. You can message students who haven't submitted work yet, those whose work you haven't graded yet, and those who scored below or above a certain grade. Dr. Janowsky used the tool to message students the day before an assignment was due with a simple note saying, "Don't forget you have work due on . . .". This resulted in far fewer emails asking for extensions or exceptions to the makeup policy. Dr. Janowsky also got a lot of responses thanking her for the reminder. Next, after each assignment and exam was graded, Dr. Janowsky messaged all the students who earned a grade below the median. The mass email, which students received as individual messages, conveyed that Dr. Janowsky noticed that they had struggled, listed the common issues that may have resulted in mistakes, offered some ways for them to improve their grades moving forward, and invited them to come and see her if they had any additional questions. This resulted in many emails thanking Dr. Janowsky for reaching out and expressing that they had never had a faculty member do that before. Several students went on to say that they had reviewed their work and found the problems themselves, whereas others asked for an appointment. Dr. Janowsky then used the message tool to select students who had earned As to congratulate them on a job well done. These students responded most frequently, thanking the professor for acknowledging their hard work. All-in-all, Dr. Janowsky reports that this was an extremely successful endeavor. It took her about ten minutes to send all the emails, and the student responses were overwhelmingly positive. It is not, however, without its downside. First, expect a lot of emails to flood your inbox after you send a message. Second, the system is clunky. It would have been great to send more personalized feedback to students (to be able to insert their names, etc.), but that is not currently an option. Also, the B students mostly were left out, because the system does not allow you to specify grade ranges. It is either everyone above a grade or everyone below a grade, vs. 80 – 90%, 70 – 80%, etc. Still, the message tool is a great feature of Webcourses that allows you to send personalized feedback and increase student-to-faculty engagement.

Karin Chumbimuni-Torres, Chemistry

In addition to online resources, there also are a number of in-class activities faculty can use to increase engagement in large courses. To give a lecture to nearly half a thousand students can be challenging, but Dr. Karin Chumbimuni-Torres, Assistant Professor of Chemistry, is determined to find ways to increase student-to-content and student-to-student interaction in Chemistry Fundamentals 1A (CHM2040). To facilitate student-to-content interaction, she **performs five-to-ten-minute topic-related demo experiments** to show students why new concepts need to be understood and how they can be applied to real life. One of the hardest subjects in general chemistry is electrochemistry, so Dr. Chumbimuni-Torres demonstrates the electrolysis of water in real-time to make the electrochemistry reactions visible to the naked eye. This motivates students to engage with the topic under study while also inspiring them to ask questions. Furthermore, the products generated in the electrolysis of water can be used to propel a toy, which makes students think critically about energy supplies. By creating a visual experience in the classroom, the concept becomes real for students, enhances critical thinking, and leaves a lasting impression. Whereas demo experiments enhance student-to-content interaction, Dr. Chumbimuni-Torres uses group problem solving exercises to facilitate student-to-student interaction. She divided students into groups of three and assigns each group a one-to-two-minute problem. This helps them get

to know one another and encourages them to work together to solve problems. This activity takes only about five minutes of class time: you ask the question, wait for the solution, and collect the results. Although it may take a few minutes away from lecture, assigning group problem-solving activities enables students to care about each other and helps alleviate feelings of isolation often generated by a large classroom setting.

Danielle Webster, Health Sciences
Similarly, Danielle Webster of the College of Health and Public Affairs **uses team-based peer-share activities** in Pathophysiology I (HSC4555) and Pathophysiology II (HSC4558), face-to-face classes of 100 students. After each lecture unit, before students take the unit exam, she has them sit in groups of eight and instructs them to come up with two or three concepts from the unit that they found difficult. With their groups they discuss each problem and explain to each other what they may or may not have understood. Professor Webster encourages students to share their methods of studying by explaining the material to their peer group. This not only promotes student-to-student interaction, but also allows students to design their own learning concepts, improve their study skills, and help their classmates. Finally, each group presents their concepts either on the white board or as a mini-lecture. Collectively the class discusses strategies that can be used to help them better understand difficult ideas. This type of activity helps students take ownership of their learning experience while also increasing student-to-student and student-to-content interaction.

Whether in class, online, or in Second Life, with fifty students or 500, you can increase student engagement and create a personalized and interactive learner-centered environment. Faculty in the College of Sciences, the College of Arts and Humanities, and the College of Health and Public Affairs employ a variety of techniques and strategies to facilitate student-to-content, student-to-student, and student-to-faculty interaction in large classes, and we hope that you will consider trying some of these activities in your own classes, no matter the size or discipline.

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Four Ways to Engage Today's Learners

Tina Rooks

This guest post comes to us courtesy of Dr. Tina Rooks, who serves as Vice President and Chief Instructional Officer at Turning Technologies, one of the vendors that supply UCF with classroom response systems (a.k.a Clickers).

Whether you're teaching a college course or delivering a corporate training session, you'll face a unique challenge when it comes to engaging today's learners. Instructors must keep in mind the interactive nature and technology orientation of today's students when designing lessons and the learning environment. Here are some tips that can help:

1. **Integrate response technology into the learning setting.** PowerPoint is the go-to solution for many instructors, and it can be a great way to present concepts and messages. But with today's learners who are used to interactive learning, sitting through a PowerPoint presentation can be a challenge. Response technology can be the answer. With an integrated response technology solution, you can embed questions directly into your slides and allow students to answer with a keypad or smartphone. Then you can display their answers—in aggregate—right on the slide. This is a terrific way to keep an audience focused and involved in the learning process.

2. **Define objectives up front.** Clearly outlining your goals for the session is a great tactic no matter who is in your audience, but today's learners in particular tend to expect open, transparent communication. State your goals for the session, and periodically measure knowledge levels to see how students are progressing during the session to make sure they are meeting learning objectives. This will not only give students a greater sense of accountability, it will let you know when to spend more time on topics and when you can fast-forward through familiar issues for a personalized learning experience.

3. **Keep slides simple.** Like a well-designed website, slides should be clean and simple. When you have a lot to say, it's tough to resist the temptation to include as much information as you can on a slide. But remember that the bulk of the knowledge transfer will occur during the discussion about the topic, not from the slide itself. Keep that in mind as you're designing your presentation, and make sure the messages are short and the slides are uncluttered. Students tend to be video and image-focused, so if you have relevant material that fits into your presentation, by all means use it. But make sure it's on point and doesn't crowd the key messages.

4. **Keep your presentation interactive throughout.** As digital natives who grew up with the Internet and in constant contact with friends, today's learners expect a greater level of interactivity. Old school presenters tend to hold the floor throughout the presentation and only allow the audience to interact at the end during a question and answer session. You'll have better luck with students if you keep the presentation interactive throughout, either by actively engaging students person-to-person or using response technology to allow them to give their input for discussion. You can design questions to measure students' topic knowledge, or you can ask open-ended questions to spark discussion—both tactics can be highly engaging.

Today's learners are used to two-way conversations rather than top-down lectures, and unless they feel included in a personalized learning process, it's a challenge to hold their attention. Fortunately, there are technology solutions and presentation techniques available that can help you engage students of any age. Use response technology to make your students a part of the action rather than passive audience members. Make sure your objectives for the course are clear and that you understand students' progress. Keep slides clean and simple to promote clarity. And keep your presentation interactive from start to finish. By following these tips, you can ensure students stay focused and engaged.

2015 Dziuban Award

The Center for Distributed Learning (CDL) has awarded the fourth annual Chuck D. Dziuban Award for Excellence in Online Teaching to Beatriz Reyes-Foster, Ph.D., from the Department of Anthropology. The award presentation occurred during the Showcase event that concluded the spring section of CDL's faculty development program for online and blended teaching, IDL6543. Along with winning the award, Dr. Reyes-Foster received an iPad tablet and a stipend to attend the 2015 Online Learning Consortium (OLC) International Conference in Orlando.

The Dziuban Award is a peer-reviewed selected honor. The award committee consists of several experienced, award-winning online faculty at UCF who unanimously voted for Dr. Reyes-Foster's Language and Culture (ANT3610) course because it is well organized, detailed, inviting, and interesting. The committee also recognized one Honorable Mention: Julie Hinkle, Ph. D., from the College of Nursing, for her innovative use of the adaptive learning software RealizeIT, which is being piloted by UCF this semester.

Named after UCF's Chuck Dziuban, the award recognizes one outstanding UCF faculty member who has taught at least one blended or fully online course within the previous academic year. Dziuban is an internationally acclaimed leader in online learning; he was named UCF's first Pegasus Professor, is currently a Professor Emeritus and was recently recognized for 45 years of service to the university.

MORE INFO ABOUT THE AWARD, ELIGIBILITY AND WINNERS: http://award.online.ucf.edu

Advice for Online Teaching from a Skeptic

Beatriz Reyes-Foster

Beatriz M. Reyes-Foster is Assistant Professor of Anthropology at UCF. Her research areas include reproductive issues in Central Florida, mental health and indigenous people in the Yucatan, and SoTL. She is the 2015 recipient of the Chuck D. Dziuban Award for Excellence in Online Teaching.

The first time I heard of online learning was when I was in college myself. Although my university did not offer online classes, the University of Phoenix was becoming more and more visible and a small number of my professors had begun to use learning management systems like Blackboard. My stepfather, who was also a professor, guffawed in scorn at the very idea. *Online classes? A computer will never replace a professor. Students need to make use of university libraries to do research. Online education will never be as good as taking classes in a classroom.*

Perhaps I'm paraphrasing my dear old Dad's words—he's turning 81 this year—but the message rang strong and true: how could online education ever compete with traditional, face-to-face education? No way. No how. When I started my own journey into academia, I firmly believed that the best learning happened in college classrooms, where I could look my students in the eye, watch their reactions, and engage them in meaningful discussions about the course material and its relevance to everyday life.

Then I landed a coveted tenure-track position in one of the worst years of the labor market. *Are you willing to teach online?* I was asked. There was only one right answer. When I started working at UCF in the fall of 2011, I was already enrolled in IDL 6543.

Last spring, I was honored to receive the Chuck D. Dziuban Award for Excellence in Online Teaching. Looking back, I feel somewhat amazed at how far I have traveled on my online teaching journey. I still believe that the best learning happens in college classrooms—but I've learned to expand my definition of "the college classroom" to include the online classroom. I've also learned, however, that teaching and learning online are different from teaching and learning face-to-face. What follows are some things I have picked up over the last few years that have led me to better understand online education and to do it well.

- *You can do it right online, you can do it wrong face-to-face.*
  Many of us who work in academia never received pedagogical training, or received very limited training. Some of us may work in fields where teaching isn't particularly valued. This means that we are very likely going to make mistakes. A class is not inherently good or bad because it's online; its quality depends on whether or not we have the tools available to us to do it right.
- *Speaking of tools, your instructional designer has them.*
  Unlike many of us, UCF Center for Distributed Learning's instructional designers do have a working knowledge of teaching and learning with technology. My instructional designer, Aimee deNoyelles, has been my best resource—she and I have designed course strategies and assignments to maximize critical thinking and engagement and talked through different ways of structuring my course to encourage student interaction. My instructional designer's expertise, online learning, helps me translate my own expertise, sociocultural anthropology, into meaningful, challenging online course materials and assignments.
- *Need more tools? Take advantage of professional development opportunities.*
  The Center for Distributed Learning (CDL) and the Faculty Center regularly offer professional development opportunities in the form of open labs, workshops, and conferences. If writing is important in your field, consider taking advantage of the Writing Across the Curriculum (WAC) program.
- *Don't be afraid of SoTL.*
  Partnering with my instructional designer to conduct research in my classroom has not only given me a couple of peer-reviewed publications and presentations to add to my tenure dossier, it's made me a more effective instructor by allowing me to systematically track how well an online classroom intervention works to foster increased critical thinking and engagement.
- *Keep accessibility in mind from the beginning.*
  Although this was a lesson driven home during IDL 6543, it's important to keep in mind: recorded lectures should always be written first, then recorded to ensure you have a transcript available for hearing impaired students. All images should have descriptive alt information, and tables should have headers. Instead of colored text, one should use black text and bolding for emphasis. Canvas makes it easy to design accessible courses with the UDOIT tool, software that analyzes your courses for accessibility.
- *Design flexibility and structure depending on how flexible and structured you need to be.*
  Think about your face-to-face classroom—how much flexibility and structure do you need? Canvas offers nearly limitless ways of structuring your courses. As an instructor, I generally need some structure, but consider my teaching to be fairly flexible. In my online classes, students have set deadlines for discussion assignments in order to ensure that they interact relatively quickly with one another, but I open modules two weeks ahead of time to allow students to read ahead if they would like. I have colleagues who allow students to do their courses at their own pace, opening new modules as they complete older ones, and I have colleagues who desire more structure than what I provide.
- *You don't have to use every tool.*
  When I first started teaching online, I used every neat tool my instructional designer showed me. Voicethread, Corkboard, Materia, Camtasia, iSpring, you name it, I tried it. I've come to realize that, for me, it is better to stick with what I know works well and with what I know I can handle. I also prefer to keep things inside Canvas because I can get easy tech support when things don't work the way they are supposed to. The tools I use the most are graded small group discussions, Twitter, Youtube, and Materia.
- *Don't let it take over your life.*
  Teaching online, like teaching face to face, can be extremely rewarding. However, it can also be extremely time consuming. Working with your instructional designer to make sure you design quality assignments and present your course material in an engaging way is invaluable—but it is also important to draw boundaries, especially if, like me, you are on the tenure-track and have research responsibilities.

There is one thing I'm sure my dad was right about: a computer will never replace a professor. It is not a computer teaching our students, it is ourselves. It is up to us to design courses that reflect this, that remind our students—and us—that there are human beings on the other side of our screen.

STEM and Non-STEM: A UCF Faculty Perspective

Dan Murphree

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Introduction

Over the past few years, pundits, politicians, and others have devoted great effort and emotion to crafting what is loosely identified as the STEM versus non-STEM Debate. At its core, this debate centers on the need to emphasize STEM (Science, Technology, Engineering, and Math) over non-STEM disciplines in higher education curricula and classrooms. Advocates and opponents of this perspective have offered multiple rationales and evidence for their positions across wide-ranging forums, in the process generating little clarity but much disagreement. Despite the many voices involved in these debates, however, those of faculty have been largely silent.

During the 2014 fall semester, UCF's Faculty Center for Teaching and Learning sponsored a multi-session workshop to help bring faculty viewpoints on this debate to the forefront. The Faculty Center extended an invitation for participation in this workshop to all faculty on campus, resulting in the enrollment of a dozen researchers/educators from the Colleges of Arts and Humanities, Education and Human Performance, Hospitality Management, and Sciences. Four times during the semester, participants collectively evaluated the literature on STEM/non-STEM debates, listened to presentations by faculty and administrators on various STEM-centered and STEM/non-STEM collaborative endeavors on campus, and offered their own viewpoints on the issues being discussed. While consensus at times proved elusive, faculty voices on these issues remained far from silent and all participants recognized the need for those actually teaching and researching in STEM and non-STEM fields on a day-to-day basis to articulate their perspectives for the benefit of all, but especially for students.

The following essay presents an overview of the viewpoints held by faculty participants in the workshop. Though the statement represents the conclusions reached by those involved, it is meant to function as a starting place for further faculty engagement with the relationship between STEM and non-STEM at UCF. The essay does not speak for every faculty member at UCF but does include the perspectives of colleagues approaching the topic from different disciplines. The authors hope these perspectives will be considered by the UCF community as a whole and lead to other faculty voices being heard. While not everyone will agree with the essay's conclusions, all should see the importance of faculty viewpoints in determining STEM/non-STEM relationships at UCF and other universities as we move forward into the 21st century.

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- Cynthia Bayer, Department of Biology
- Christa Diercksen, Department of Biology
- Bruce Janz, Department of Philosophy
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- Rob Reedy, School of Visual Arts and Design
- Pam Thomas, Department of Biology
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Position Statement on STEM and non-STEM Issues in Higher Education

Often reductive, inaccurate, and divisive, current debates about STEM/non-STEM disciplines ignore the fundamental question: What do students need? We believe the answer is not either/or, but both/and. Both STEM and non-STEM disciplines are vital components of college curricula, and as such deserve comparable attention, encouragement, and support. Actively integrating STEM and non-STEM curricula can offer students interdisciplinary preparation for a world of interdisciplinary challenges.

Many of the largest and best-funded research universities already acknowledge the humanities and other disciplines as equal and essential partners to STEM.

Deborah Fitzgerald, of MIT's Program in Science, Technology, and Society, supports this view in her recent *Boston Globe* op-ed, "From climate change to poverty to disease, the challenges of our age are unwaveringly human in nature and scale, and engineering and science issues are always embedded in broader human realities, from deeply felt cultural traditions to building codes to political tension."

We believe that a curriculum that puts aside artificial disciplinary barriers can provide undergraduates with a rigorous and relevant academic experience. As every academic discipline in colleges and universities across the United States

teaches the same habits of mind—how to think critically and creatively, how to solve problems, and how to communicate their work effectively—curricular attention to the similarities among disciplines, instead of their differences, can only improve student learning.

Therefore, future discussions regarding STEM and non-STEM education should focus on interdisciplinary collaboration instead of disciplinary segregation. For example, Morgan State University may offer lessons for those seeking to undertake such work. As part of the NSF-supported "Preparing Critical Faculty for the Future," an interdisciplinary project with the goal of increasing participation of women of color in STEM fields, participants formed a STEM Research and Education Project in which faculty developed new ways to help STEM-majors solve interdisciplinary problems.

The project, interdisciplinary at all levels, included the use of surveys to assess faculty perspectives on interdisciplinary issues and emphasized applied learning. The university's administration sought to "bring down silos" dividing academic disciplines by acknowledging the need for integrated learning to be supported by administrators and rewarded through faculty incentives. With administrative support, faculty at UCF and elsewhere can play a key role in developing and coordinating related initiatives, policies, and programs.

Certain disciplines commonly merge STEM and non-STEM fields, e.g., History and Philosophy of Science, Environmental Studies, Digital Humanities, and Digital Media. In addition, the success of programs initiated by individual UCF faculty to integrate seemingly disparate disciplines such as Visual Arts and Design with Engineering, History with Engineering, and Digital Media with Anthropology, demonstrates the value of collaborative approaches to teaching and learning.

These kinds of interactions expand a student's view of their field of study and its connection to others.

If the goal of higher education is to explore and understand the connections and relationships between the natural world and the human experience, a collaborative approach can provide the opportunities for the kind of creative thinking required for complex problem solving, innovation, and career success. The UCF community can be at the forefront of these efforts and serve as a model for institutions of higher education.

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To maintain global supremacy, it's said, the United States needs more college graduates in science, technology, engineering, and math. The numbers tell a different story. It depends on who you ask. Universities don't want to lose their grants or research standing. Tech Companies don't want wages to go up.

"Arts, STEM and Patents." *Inside Higher Ed.* 24 Oct. 2013.

Reports on a study by Michigan State suggesting that STEM kids who had "sustained" arts/music training led to majors in STEM disciplines. "93 percent of the STEM graduates reported musical training at some point, compared to 34 percent of adults on average. Further, those who owned businesses or patents received up to eight times more childhood exposure to the arts than did adults on average." Correlation is NOT causation.

Association for American Colleges and Universities. **"Morgan State University: Overcoming the Barriers to Interdisciplinary STEM Learning."** April 2013.

Reports on 1st year progress of a grant to Morgan State from NSF (and others) aimed at helping women of color faculty in STEM fields take on new leadership roles. In addition to working on their individual leadership skills, the women selected for the project began planning a formal Interdisciplinary STEM Research and Education Project aimed at bringing together faculty from the STEM disciplines and beyond to collaborate intentionally on both teaching and research. One emerging goal focuses on making the general education curriculum more integrated with students' major coursework, Coleman says.—making learning interdisciplinary at ALL levels—applied learning and "bringing down silos.

Berrett, Dan. **"Lectures Still Dominate Science and Math Teaching."** *Chronicle of Higher Education.* 25 Oct. 2012.

A survey found that 63 percent of STEM faculty use "extensive lecturing," which may help explain the high attrition rate among students in those fields. "We have a really good idea about what doesn't work: lecturing students without engaging them, having labs not linked with lectures," says James S. Fairweather, Professor of Educational Administration at Michigan State University and a co-principal investigator of an Association of American Universities project that seeks to improve STEM education.

Fewer than 40 percent of those who enter college intending to be STEM majors complete a degree in one of those fields, according to a report issued this year by the President's Council of Advisors on Science

and Technology. Grading on a curve is common—to distribute grades along a bell curve.

Branscomb, Lewis, Fumio Kodama, and Richard Florida (1999). ***Industrializing Knowledge: University-Industry Linkages in Japan and the United States.*** Boston: MIT Press, 1999.

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Reports on how science alone cannot secure the economic and security of the US.

Croes, Robertico. **"Is the Stem Centered Priority Misplaced?"** *International Journal of Hospitality Management*. 36(2014): A1-A2.

Fitzgerald, Deborah K. **"At MIT, the humanities are just as important as STEM."** *Podium*. Boston Globe, 30 April 2014. Web. http://www.bostonglobe.com/opinion/2014/04/30/mit-humanities-are-just-important-stem/ZOArg1PgEFy2wm4ptue56I/story.html

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Florida, Richard, and Martin Kenny. ***The Breakthrough Illusion: Corporate America's Failure to Move from Innovation to Mass Production*.** New York: Basic Books, 1990.

Gates, S. James, and Chad Mirkin. **"Encouraging STEM Students Is in the National Interest."** *Chronicle of Higher Education.* 25 June, 2012.

Raising enrollment in science, technology, engineering, and math courses may seem like a daunting task, but it doesn't have to be. We must produce approximately one million more workers in those fields over the next decade.

Why students drop out of STEM studies. Among the leading reasons are uninspiring introductory courses, difficulty with the required math because of a lack of adequate preparation, and an academic culture that is sometimes not welcoming, particularly to women and minorities, who constitute 70 percent of college students but earn only 45 percent of STEM degrees.

Suggest improved teaching practices (inquiry-based) in intro courses; bridge programs w/ high schools & community colleges; support research collaborations with non-research college; establish partnerships with private sector.

Jaschik, Scott. **"The STEM Enrollment Boom."** *Inside Higher Ed.* 7 April 2014.

Reports on "new data" from most recent AERA by Jerry A. Jacobs, Professor of Sociology at the University of Pennsylvania, and Linda Sax, Professor of Education at the University of California at Los Angeles. The new study is based in large part on the "freshman survey" conducted annually by UCLA on a national pool of freshmen at four-year institutions. It represents a 48 percent increase in just a few years.

Kenny, Martin, and Richard Florida. ***Beyond Mass Production: The Japanese System and Its Transfer to the US.*** Oxford: Oxford University Press, 1993.

Klein, Julie Thompson. ***Interdisciplining Digital Humanities: Boundary Work in an Emerging Field*.** 2014. http://dx.doi.org/10.3998/dh.12869322.0001.001

This book looks at instititional structures and disciplinary implications in one possible STEM/non-STEM arena—the digital humanities.

Klein, Julie Thompson. **Creating Interdisciplinary Campus Cultures: A Model for Strength and Sustainability**. Association of American Colleges and Universities/ Jossey-Bass, 2010.

Kristof, Nicholas. **"Don't Dismiss the Humanities."** *New York Times*. New York Times, 13 Aug. 2014. http://www.nytimes.com/2014/08/14/opinion/nicholas-kristof-dont-dismiss-the-humanities.html?hp&action=click&pgtype=Homepage&module=c-column-top-span-region&region=c-column-top-span-region&WT.nav=c-column-top-span-region&_r=0

Laird, Thomas F. Nelson, and Alexander C. McCormick. **"STEM/Non-STEM Differences in Engagement at US Institutions."** NSSE. Summer 2011.

Nelson Laird and colleagues examined disciplinary differences in the extent to which students are exposed to educational environments that promote deep approaches to learning. Deep learning is better. They pitch "pedagogies of engagement." It is discouraging that nationally, faculties in STEM fields tend to have lower expectations for integrative and reflective learning relative to other faculty, and that results from seniors reflect those differences. They researched Deep Learning to see if ANYONE in STEM is using its pedagogy. Research universities "point to discouraging results." They recommend "active and collaborative learning practices."

Letters. (re: Kristof's **"Don't Dismiss the Humanities.")** *New York Times.* New York Times, 19 Aug 2014.

Maxfield, Sylvia. **"Save the Humanities / Keep Business Schools."** *Inside Higher Ed.* 7 August 2014.

Undergraduate business schools generate revenue for universities. But we also need the humanities departments precisely because they help our business students become individuals whose actions will demonstrate strong moral and ethical behavior.

We need humanities departments to help illuminate the powerful ways in which business can be a force for good. Confucius put it succinctly, as always: "Virtue is the root, while wealth is the branch." Rather than succumbing to fear and negativity in the face of financial pressures, faculty should take up the challenge of being credible, respected advocates for integrative learning and for the changes required to make it a reality.

National Academy of Sciences, National Academy of Engineering, and Institute of Medicine. ***Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future: Executive Summary.*** 2005. http://www.nsf.gov/attachments/105652/public/NAS-Gathering-Storm-11463.pdf

A report in response to a request by the Senate committee on Energy and Natural Resources to identify the top 10 priority actions that federal policy makers could take to enhance science and technology in the US.

National Center for Education Statistics. **"STEM Attrition: College Students' Paths Into and Out of STEM Fields – Statistical Analysis Report."** Nov. 2013.

104 page–statistical analysis of why students start, but do not stay STEM majors. Forty-eight percent of bachelor's degrees and 69% of associate degrees, changed majors. Counter-intuitively, high performing students, or academically strong students may be more prone to leave STEM field than low performing or academically weak students who were more likely to leave STEM fields by leaving college.

NEH STEM and the Humanities.
http://www.neh.gov/about/chairman/congressional-affairs/explore-connections-between-stem-and-the-humanities

NEH Google Hangout: 21st Century da Vincis: How Humanities and STEM Intersect.
http://www.neh.gov/about/chairman/congressional-affairs/explore-connections-between-stem-and-the-humanities

NEH Google Hangout: From Thomas Edison to Steve Jobs: STEM and Culture Across the Government
http://youtu.be/6Jcwm7J2RnA

NEH Google Hangout: Following Galileo: The Humanities and Sciences in the Classroom
http://www.youtube.com/watch?v=4_6O7lK_034

NEH Google Hangout with Ed Ayers and Ira Flatow: Digital Humanities, STEM and Humanities.
http://www.youtube.com/watch?v=pBb0FU3qyo0

Newfield, Christopher. "Is College Still Worth It?" *Los Angeles Review of Books.* 10 Oct. 2014.

Redden, Elizabeth. **"Falling Behind."** *Inside Higher Ed.* 23 May 2014.

Pushes back on claim that we need more STEM grads to keep us competitive in the global marketplace. Supports Michael S. Teitelbaum's recent book *Falling Behind?: Boom, Bust & the Global Race for Scientific Talent.* [Makes same arguments as "The STEM Crisis: reality or myth?"]

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Reports on a paper at a recent Assoc. International Ed. Administrators that suggests STEM majors need study abroad opportunities. Pre-requisites and no foreign language are barriers. They presented on two programs that had found a way to meet those challenges. Makes a 5th year of undergraduate school necessary.

Rivard, Ry. **"What do the People Want?"** *Inside Higher Ed.* 24 April 2014.

Reports on a survey, based on 115 forums – a joint project of Public Agenda, the Kettering Foundation, and the National Issues Forum – found participants were alarmed by debt, but not government spending; didn't want the country's colleges and universities to abandon philosophy and the liberal arts as it focuses on science, technology, engineering and math; and were struggling to balance the pros and cons of a traditional four-year degree. ALL participants were all stakeholders in high education.

Simmons, Elizabeth H. **"Humanities Strengthens Science."** *Inside Higher Ed.* 14 Aug. 2014

Theoretical physicist Simmons describes a visit to the Cushing Center at Yale, where brains + collages of the person are displayed. As a scientist, I was reminded viscerally that this is exactly what we mean when we say all science exists within a human context. First, the combined images *document* the course of medical history, forming what the biographer Aaron Cohen-Gadol calls "the diary of neurological surgery in its infancy." Second, the combined images directly *influenced* the course of medical history.

The juxtaposition of Cushing's images therefore represents the very essence of how the humanities and sciences are intertwined: to fully prepare for careers in science, it is essential that students grasp how the impetus for scientific work arises from the world in which the scientist lives, often responds to problems the scientist has personally encountered, and ultimately impacts that society and those problems in its turn. Programs that deliberately train scientists in the humanities are so essential to educating scientists effectively. She gives advice about HOW to infuse a science curriculum with humanities.

"Study Finds No Shortage of STEM Workers in U.S." *Inside Higher Ed.* 25 April 2013.

Reports on an Economic Policy Institute (non-partisan, but liberal leaning think tank) study suggesting there is NO shortage of STEM grads.

Tyson, Charlie. **"Humanities vs. STEM, Redux."** *Inside Higher Ed.* 18 August 2014.

Why do the humanities claim a larger share of credits earned? General education requirements draw many non-majors to humanities courses. But another factor is the amount of crossover – or lack thereof – among disciplines. Humanities courses, more so than STEM courses, draw non-majors. But humanities majors venture into STEM far less often….Bradburn said colleges ought to have "strong liberal education requirements for everybody." Rigorous academic advising, rather than general education requirements, could prompt students to explore new fields, the college president said. "When you talk about liberal education, that includes the sciences," he said. "That includes all the STEM fields. Insofar as we can use reports like this to remind one another that education combines the sciences, social sciences, humanities and artistic practice that will serve our students better."

U.S. Joint Economic Committee **"STEM Education: Preparing for the Jobs of the Future"** April 2012.

The talking points: Demand for STEM workers is projected to increase. High demand will lead to lower unemployment and higher wages (circular argument). Supply is not keeping up with demand. Gender, race gaps affect supply. For example, NAFTA members (including Germany) graduate more STEM students as a shore of all degrees than the US does. We fall short because K-12 underprepares, and we haven't communicated the "benefits of a STEM education." Need to make college more accessible so the pool of potential STEM majors will increase. We also need to improve STEM education teaching practices.

Teaching Scientific Literacy in the Humanities

J. D. Applen and Sonia Stephens

J.D. Applen teaches technical communication in the Department of English and is Associate Professor. He also teaches in the Digital Humanities minor and the Texts and Technology Ph.D. program in the College of Arts and Humanities.

Sonia Stephens is Assistant Professor of Technical Writing in the Department of English and teaches in the Texts and Technology Ph.D. Program. Her research focuses on technical and scientific communication using visual and interactive media.

Introduction

While scientific literacy has been the traditional province of courses taught in the College of Sciences here at UCF, some of its basic principles can also be taught and reinforced in LIT 4433, The Literature of Science and Technology, a course we teach in the Department of English. In our course, we do not pretend to teach the science skills learned in formal lab work or scientific fieldwork. Instead, we work to teach our students to be cognizant of the way science is presented in popular scientific literature with the belief that educated citizens in a democracy should be able to understand and engage in public debate and to make informed decisions as voters. We also emphasize the literary merit and cultural concerns of texts, issues that are traditionally associated with literature and the humanities. Some questions we ask are: What are the rhetorical dimensions of the text? What is the ethos or authority of each text's authors? How does the style and narrative structure support the content of each text?

This course gives students experience connecting the humanities and STEM fields by critically examining narratives of science through a humanistic lens. It demonstrates the importance of inquiry that explores the bonds between scientific research and the human experience, and gives both STEM and non-STEM majors a foundation by which they might better understand the ethical and historical implications of future scientific discovery.

Benchmarks for Scientific Literacy

Scientific literacy is a contested concept, but commonly agreed-upon skills associated with it include: asking questions about what constitutes sound scientific reasoning, evidence, and experimentation; bringing scientific reasoning and arguments to local and national affairs and policy; and challenging the assertions of others who do not understand the scientific method and what constitutes scientific evidence. Each of these skills can be taught via discussion of narratives about science.

To illustrate how these skills can be taught and reinforced in LIT 4433, we demonstrate how two texts that popularize science can be used to address science literacy benchmarks developed by Project 2061, an initiative of the American Association for the Advancement of Science (http://www.aaas.org/program/project2061). While the benchmarks we focus on were developed for Grade 12, we suggest that they are relevant as a starting point for reinforcing scientific literacy skills for undergraduate students.

The Double Helix: A Personal Account of the Discovery of the Structure of DNA

Published in 1968 by James Watson and considered a modern classic in popular scientific literature, this text moves between personal memoir and scientific exposition. However, it is a controversial text as many in the scientific community have challenged Watson's depiction of the work he did with Francis Crick to discover how genetic material is transferred from generation to generation, and it allows us to consider these scientific literacy benchmarks:

- Development of new scientific ideas: context, weight of evidence (1B/H7)
- Scientists' possible personal and institutional bias (1C/H6d)
- Structure of DNA as genetic material (5B/H3)
- Use of models in science (11B/M1)

What becomes evident in this narrative is that Watson and Crick did not engage in traditional laboratory work like their contemporaries; instead, they borrowed information from others to theorize possible models for DNA. Many were concerned that Watson did not give the crystallographer Rosalind Franklin as much credit as she deserved as they relied heavily on the information her work revealed. There were also charges of misogyny against Watson because of his personal and professional characterization of Franklin, which even concerned Crick, who was on better terms with her. Also, Watson and Crick employed the use of metaphor to imagine how the empirical data they considered could better produce a workable model, the double helix, and this compels our students to consider how figurative language as understood in the humanities can be employed in other fields.

The Immortal Life of Henrietta Lacks

This 2010 book by Rebecca Skloot discusses issues of race, class, and medical ethics. It particularly focuses on how ideas about the latter have been interpreted and developed over

time. The book tells the story of Henrietta Lacks and her children. Lacks' cells were taken without her consent before her death and later used extensively in medical research. Because of this focus, it is particularly well suited to explore the following science literacy benchmarks:

- Ethics, informed consent, and human subjects research (benchmark 1C/H5a)
- Scientists' possible personal and institutional bias (1C/H6d)
- Questioning the benefits and harms of new technologies (3C/H3)
- Critical reflection on science and technology (12A/H2)

One issue the book addresses is balancing patients' right to benefit financially from research using their tissues with the broader public good. It contrasts the story of the Lacks family, who received no compensation for the use of their mother's cells, with the experiences of other patients who were informed by physicians that they could legally profit from research on their tissues and genes. One researcher in the book makes the argument that limiting individuals' profit ultimately benefits everyone by making research possible. A key point of discussion for students in response to this argument is that the Lacks family could not themselves afford even basic health care at the time the book was written. This aspect of the story addresses the complexities of access to treatments and medications in a profit-driven health care system, and requires students to think about intended and unintended consequences of new medical technologies.

Conclusion

By emphasizing the elements of scientific literacy in the texts taught in LIT 4433, we can help students learn how to critically discuss the benefits and costs of science to society, regardless of their major field of study. Students can also learn to understand how science is practiced and how oversight is used to counteract bias. It is our hope that by learning both STEM and humanities skills, the students who take this course will be better judges of scientific issues in our culture; they will be better voters and community leaders and know how to more ably assess science-society issues.

UCF Diversity and Inclusion

Karen Morrison

Karen Morrison is Chief Diversity Officer and leads the Office of Diversity and Inclusion, which she joined in November 2014. After 16 years at the University of Colorado, she worked eight years at the NCAA, first as Director of Gender Equity and Educational Services, and later as Director of Inclusion. She is also a founding member of the national LGBT Sports Coalition and was both an assistant basketball coach at the University of Colorado Boulder and a player at the University of Oklahoma. She earned a J.D. from the Notre Dame Law School.

My name is Karen Morrison, and I joined the UCF staff in the newly-created role of Chief Diversity Officer (CDO) last November. Essentially, my role as our university's CDO is to facilitate collaboration and communication across the campus and with the larger community; to develop effective training and educational events; and to support efforts to improve the professional and learning environment in support of the university's goal of becoming more inclusive and diverse. This is a first for UCF, signaling a change of course on these issues and an emphasis on enterprise-wide improvement of the culture for faculty, staff and students. UCF serves a diverse student population. We are well on our way to Hispanic Serving Institution status. The diversity of our faculty and staff across many dimensions of identity and experience make this campus vibrant.

Faculty play a critical role in the discussion of these issues and priorities and in the creation of a professional and educational climate that brings equitable opportunity to each participant. Through the Diversity Track of the Summer Faculty Development Conference, UCF faculty have developed

- cultural competency resources to support fair and accessible teaching environments: https://diversity.ucf.edu/files/2015/04/21-Cultural-Competencies-With-Levels.pdf, and
- guidance for creating inclusive college classrooms: https://diversity.ucf.edu/files/2015/06/Tips-for-Creating-Inclusive-College-Classrooms.pdf

UCF has a model syllabus statement available to help you describe respectful classroom expectations and resources available to students regarding accommodation of disability and health and safety. Our training staff welcome the opportunity to come to your classroom to provide workshops on diversity and inclusion topics.

I have two over-arching priorities in this first year. The first is to develop a mechanism for communication and collaboration across the entire campus for all engaged in diversity and inclusion work. UCF has many units doing outstanding diversity and inclusion work. We now have a cross-campus working group with nearly 30 members charged by President Hitt to

- improve cross-campus communication and collaboration
- exchange data and strategies for improving our university's culture that will support the recruitment and retention of faculty, staff, and students
- discuss policies and procedures for campus diversity and inclusion efforts, training, and events
- cross-promote programs and events, and
- anticipate issues and opportunities to improve diversity and inclusion at UCF.

The Office of Diversity and Inclusion (ODI) has launched a redesigned website at www.diversity.ucf.edu and enhanced engagement on social justice topics via Facebook and Twitter (@UCFODI). The website will eventually provide data about UCF faculty, staff and students, making comparisons to our peers and regional and national trends, and eventually provide qualitative information about under-represented experience at UCF and our programming effectiveness.

My second priority is to raise the awareness of what UCF means by diversity and inclusion; why these efforts are important to our primary mission; and how departments and individuals can contribute to an inclusive culture. UCF is strongest as a higher education institution, employer and community leader when we bring diverse thought and experience to our decision-making, teaching, research, learning, and interactions among community members. Respect for and the inclusion of diverse voices

- drive innovative thought and action
- maximize the talent and contributions of faculty, staff, and students
- improve recruitment and retention, and
- build a campus more representative of our constituents and Central Florida partners.

This fall you will notice a campaign called RESPECT UCF, leading into the 2015 UCF Diversity Week, October 12-16, focusing collective attention on a broad range of topics. RESPECT UCF seeks to persuade the UCF community to

- engage with each other, recognizing and valuing each life as exceptional, in agreement or disagreement, in a manner that appreciates our distinctive experience and perspective as an opportunity to learn and to professionally achieve our highest potential, and
- contribute to and hold each other accountable for a culture that honors diversity, expects nondiscriminatory language, acknowledges the dignity of every individual, welcomes the opportunity to learn from and empower each other, recognizes that we are all a collection of identities and experiences rather than living symbols of a singular stereotype.

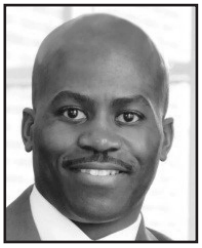
RESPECT UCF is intended as both a long-term framework for education and dialogue and a clarion call to actualize our aspirations of an inclusive community. Contribution to an inclusive culture may require you to get uncomfortable, to self-reflect, to be authentic, and to advocate for others and facilitate their voices. Together we can model an inclusive community by expecting respect and giving it in equal measure.

I need your advice and support. If you have suggestions or are interested in joining a faculty advisory board on diversity and inclusion, please contact me at karen.morrison@ucf.edu. I wish you the very best as the fall semester begins.

Please also see the Faculty Center's website for suggested language to use in your class syllabi about inclusion, safety, and disability accommodation at UCF:
http://fctl.ucf.edu/TeachingAndLearningResources/CourseDesign/Syllabus/statements.php#diversity

UCF Student Development and Enrollment Services

Anthony Jenkins



Anthony Jenkins is Senior Associate Vice President and Dean of Students for Student Development and Enrollment Services. Dr. Jenkins supervises the Offices of Counseling & Psychological Services, Student Health Services, Safety and Neighbor Relations, Office of Student Rights & Responsibilities, and Wellness & Health Promotion Services.

I am the Senior Associate Vice President and Dean of Students in the Division of Student Development and Enrollment Services.

After leaving high school and serving in the United States Army, I earned a Bachelor's of Science degree from Fayetteville State University, a Master's from North Carolina Central University, and my Ph.D. in Student Affairs from Virginia Tech University. I have enjoyed my tenure in higher education as both an administrator and instructor.

I am a first-generation college student who has benefited tremendously from my education. As an undergraduate student,

mentoring and experiential leaning were two key factors that not only added value to my college experience, but also strengthened my leadership skills and academic success.

As far back as I can recall, my mentors have been instrumental in my success. These were men and women who took me under their wings and helped me grow, realize my potential, and enrich the quality of my life. They changed my future because they challenged and supported me, and that is what I want for every student I interact with at UCF.

Throughout my tenure in higher education, I have sought to create college environments that are holistic in nature: campus environments that foster intellectual curiosity, personal accountability, high scholarly expectations, and strong social justice cognizance. I am of the opinion that it will no longer be sufficient for colleges and universities to just produce graduates who are only consumed with high paying jobs, acquiring material possessions, or being self-centered citizens; rather, we must produce graduates who are sensitive to the wrongs, the sufferings, and the injustices of our society and who are willing to accept the responsibility of addressing those ills. I see my role as not just helping UCF grow, but also as helping UCF lead in cultivating good students, honest students, and upright students. I want students to understand the unique privilege of membership into our UCF community of scholars. I want UCF to continue serving not only as a preparation ground for individual growth and success, but also as training for leadership that can change the world.

I have never accomplished any of my goals in a vacuum, and do not expect anything to change at this juncture in my career. What I envision for UCF will require strong partnerships across the university—students, faculty, staff and administrators working together in the classroom and beyond. What can be better than being an educator and public servant? What can be more rewarding than to have the privilege of working in a setting whereby one gets the opportunity to transform lives and generations they may never meet? I want all capable students to have the opportunity to experience the world-class education that UCF offers, as well as an opportunity to share with the world the UCF philosophy. I love what I do. I embrace being an educator, administrator and mentor. Recently, I received an unexpected email from a mentee, it was yet another reminder that we all can make a difference.

"Dr. J, I hope all is well. I do not want anything; I just wanted to say Thank You. You becoming my mentor a year ago simply changed my life. It was not until I was able to have my one-on-one meeting with you that I realized that I was exactly where I needed to be. As you may remember, prior to speaking with you my spirit and passion for helping students was broken. Your words encouraged me and reminded me that I was simply "good enough." I used those words and began to apply them to my everyday life. Now I am a Doctoral Student at Morgan State University in their Community College Educational Leadership Doctoral Program where I just completed my 1st year. Every day so far has been hard, but I use my free time to reflect back on the many conversations that we had. I am beginning to join more committees, and I have been applying for higher-level positions (something I am still nervous about). With all that being said, I just want to say thank you for changing my life. I believe that God puts people in our paths for a reason and you were Heaven Sent."

As a member of this great community, I am willing to do all I can…and then some. I challenge you to join me.

Graduate Student Association Updates

Paul Whalen

Paul Whalen is a second-year Master's student in the Higher Education & Policy Studies program. Currently President of the Graduate Student Association, Paul hopes to build the visibility of graduate education and involvement through engagement with faculty, administrators, and other partners across the university.

In 1992 President Hitt selected graduate education at the University of Central Florida to be among his five visionary goals to "achieve international prominence in key programs of graduate study and research." Since then faculty have educated and trained graduate students into top professionals, building dynamic graduate programs along the way. In the midst of this success, surveys of exiting graduate students have shown that graduate students consistently respond in large proportions that they do not access available professional development, involvement, workshop, speaker, or other opportunities outside of their departments. I suspect this is partially due to inconsistent leadership, specifically in the Graduate Student Association (GSA), that could unite graduate students across disciplines towards realizing common programming, professional development, and advocacy of policy for all graduate students. Other Florida universities have strong graduate associations, governments, and other bodies that provide opportunities tailored to graduate student needs. UCF's GSA can develop strong and consistent leadership especially when it does so in a culture that seeks to identify graduate student needs across the institution through collaboration and developing programming, professional development, and involvement opportunities which are rooted in those needs.

As the new president of the GSA, I've spent the last four months speaking with numerous graduate students, administrators, and faculty across the university to identify needs common to graduate students across disciplines with opportunities that will appeal to a broad swath of that diversity. I believe that effective initiative and leadership in developing such opportunities will ultimately increase the visibility of not only the Graduate Student Association but that of the excellence, expertise, and professionalism of graduate students. Collaboration is a key element in this. I will be seeking out offices, programs, and partners with whom to develop and execute programming and to assist with networking opportunities.

Central to building up opportunities for graduate students is engaging graduate faculty. Faculty play a key role in building the professional development and skillsets for all students, but especially for graduate students. In particular, developing the conversation about graduate student needs will occur far more effectively if GSA is able to engage faculty in that conversation and allow that conversation to evolve into not just what graduate students need to diversify their professional experience, but what faculty see as weaknesses in their resumes and CVs that GSA can attempt to address.

For this Fall, I've pushed for GSA to focus on programming for distance-learning and international graduate students, building relationships with other graduate organizations, and social justice on student homelessness. While there will be opportunities throughout these programs for graduate students to get involved, GSA will have some solid professional development opportunities where faculty involvement will be most meaningful.

A new Advisory Board will have a graduate student representative from each graduate college (11 posts), as well as individual posts for graduate faculty members. The function of the Advisory Board is to discuss graduate issues being experienced at different colleges and to identify issues common across all colleges. With assistance from Online@UCF, GSA has had a special programs webcourse set up to facilitate additional graduate student interaction and discussion of issues. This will be a great tool for online and distance learners but also for graduate students and graduate faculty whose time is already at a premium. In particular, the webcourse will allow the Advisory Board to conduct most of its discussion online and find a time to meet in person during the course of the semester.

We've been actively seeking out additional professional development opportunities such as graduate student posts on Faculty Senate committees, posts in the Student Government Association senate, creating a Graduate Think Tank to envision new programming, and a Special Task Force with new directorship positions tailored towards leadership in areas such as supporting research, housing, programming, etc. Ultimately, this will allow graduate students to gain experience in different areas and allow them to gather information about how faculty, administrators, and other stakeholders envision the UCF graduate experience.

The knowledge and experience that graduate faculty possess make their contributions and feedback vital for GSA programs. Faculty are the single greatest ally in engaging more graduate students. I will be seeking graduate faculty for the Advisory Board and will continue discussing graduate student needs throughout the coming academic year.

Faculty Center Fall Programming

Register for Fall 2015 cohorts via Qualtrics by 5:00 p.m., September 10th. For the registration link, please visit http://fctl.ucf.edu/Events/FacultyDevelopmentCohorts/

Fall Faculty Development Cohort: Bring Your Own Device (BYOD)
Tuesdays 2:00–4:00 p.m.: 9/15, 10/6, 10/27, 11/17
The increasing presence of smartphones, tablets, and laptops on campus has created new opportunities for digitally-enhanced activities. Bring Your Own Device (BYOD) requires students to bring such devices to class in order to participate. Well-designed BYOD activities can help to increase student engagement and enhance lessons with online resources. Faculty will participate in a series of four workshops. The workshops will emphasize BYOD design, collaboration, and assessment. Current examples of BYOD will be integrated into each workshop. Faculty will also have the opportunity to attend (in person or virtually) additional optional presentations that showcase various BYOD technologies. If you have any questions, please email anna.turner@ucf.edu. Participants will receive a $300 grant upon successful completion of the project.

Fall Faculty Development Cohort: Role-Immersion Activities for Student Engagement
Wednesdays 1:00–3:00 p.m.: 9/16, 9/30, 10/14, 11/18
The Faculty Center for Teaching and Learning offers faculty members the opportunity to examine how role-immersion activities can improve student engagement and learning. Faculty will participate in four workshops and work collaboratively to design a significant immersion project for a class. The deliverables include an assignment description, a list of readings for students, descriptions of roles or personae, a schedule

for students to practice and perform, and assessment materials appropriate to the project. We will also be reading *Minds on Fire: How Role-Immersion Games Transform College* by Mark C. Carnes (2014). This study is based on interviews with students and faculty who participated in the pedagogical innovation "Reacting to the Past," which began at Barnard College (https://reacting.barnard.edu/). Our meetings will be held in the Faculty Center (CB1-207). If you have any questions, please email eric.main@ucf.edu. Participants will receive a $300 grant upon successful completion of the project. The participants also become part of an ongoing research project on effective teaching and learning. Faculty are requested to share data on the effectiveness of activities and environments on student learning for potential publication. Participants may also use any data collected in their classroom for their own publication.

Winter Faculty Development Conference
December 16-18
Every December, the Karen L. Smith Faculty Center for Teaching and Learning organizes and hosts the Winter Faculty Development Conference following final exams. This event focuses on community building, interdisciplinary collaboration among faculty, and inviting new voices into conversations about campus and classroom challenges. Look for our announcement in October.
http://fctl.ucf.edu/Events/WinterConference/

Critical University Regulations, Policies & Procedures, and Faculty Responsibilities

As we begin the new semester, please take time to review important policies that cover working with students, campus security and safety, faculty evaluation, promotion and tenure, information security, and more.

The Faculty Center, in collaboration with the University Compliance, Ethics, and Risk Office, has put together the document you will find at the URL below. It brings together materials from a variety of campus sources, including the Faculty Handbook, to provide faculty members with a quick view of important information.
http://www.fctl.ucf.edu/FacultySuccess/SemesterEssentials/content/critical_university_policies.pdf

UCF Students Encouraged to "Think 30"

A campus-wide initiative will be launched in the fall encouraging students to "Think 30". The Think 30 campaign was created to encourage UCF students to complete 30 credit hours each year with the goal of a timely graduation that minimizes the expense of a college degree. The campaign has three areas of focus: academic advising, financial literacy and preparing for the future. Students can expect to see Think 30 marketing across campus in the fall and discuss this concept during their advising appointments. Incoming first year students started to receive the Think 30 message during their orientations over the summer.

For more information, visit www.sdes.ucf.edu/think30

Submissions

The *Faculty Focus* is a publication for all instructors at the University of Central Florida. This includes full-time and part-time faculty and teaching assistants at all UCF campuses. Its purpose is to provide an exchange of ideas on teaching and learning for the university's community of teachers and scholars. It is envisioned that this publication will inspire more dialogue among faculty whether in hallway discussions, departmental meetings, or in written articles. This represents an opportunity for faculty members to reach their peers throughout the growing UCF community. The *Faculty Focus* invites you to contribute your ideas on teaching and learning in a short essay. See the guidelines for submission online at <http://www.fctl.ucf.edu/Publications/FacultyFocus/submission.php>. Please send your submissions to fctl@ucf.edu.

The ideas and opinions expressed in the articles featured in the *Faculty Focus* belong to the authors and do not necessarily reflect those of the Faculty Center or of UCF.

KAREN L. SMITH Faculty Center for Teaching & Learning

UCF Stands For Opportunity

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