



# Center for Teaching Excellence Hampton University Teaching Matters

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## Profile of a Scientist: An Interview with Dr. Michelle Claville

By Zina McGee, CTE Associate for Research



Dr. Michelle Claville

As part of a special series, our next three issues will be devoted to interviewing and profiling a few of the University's Research Scientists for the CTE Newsletter.

This month I had the pleasure of interviewing Dr. Michelle Claville, Assistant Dean of the School of Science and Associate Professor in the Department of Chemistry. Take a moment to read about her remarkable accomplishments and plans for the future!

***What are the typical practices, work approaches and support resources that allow you to maintain both outstanding teaching and research profiles?***

Whether fortunately or unfortunately, we live in a time when some value receiving a degree above the value of the associated transformation. As an educator, I believe that it is my challenge to promote the "whole education" of my students. This means, I am responsible for more than delivering course content; I am also responsible for inspiring respect for the content, and delivering it in such a way that the student will be intrigued enough to continue learning outside of my purview. How do I do that? I start off by teaching fundamentals to my students – kind of the "Mr. Myagi" method used in *The Karate Kid*. Of course, time is always a menacing factor due to the ever-present pressure of covering countless topics in a very small amount of time. To that concern, I respond with, "No worries." Why? If I take the time to teach fundamentals in a lecture or laboratory setting so that I KNOW that I

have engaged my students and they get it (i.e. fundamentals), I am sure that they can apply those fundamentals to difficult topics, and be successful.

So, let me stop spewing this philosophical discourse, and get on with it. Here are the things that I do. In a lecture, I'll tell the students that my lectures are conversational. I explain that I will do most of the talking, but at various points, I will engage them in conversation. I will then discuss a concept, and if applicable, I'll relate it to material that they should have learned in a pre-requisite course. (NOTE: My course of specialization is Organic Chemistry. I'll relate information to topics covered in General Chemistry and Mathematics. If possible, I'll even use real-life, non-chemistry scenarios as analogies to explain a topic). Once I believe that I have "sufficiently" conveyed a concept, I'll then give examples of quiz or examination questions, and engage the students in solving the problems. In an effort to "seal the deal," I'll finish by posing a question and asking students to vote on suggested answers offered by fellow classmates. In all cases (whether correct or incorrect), students must explain how they have come to their conclusion. We (the entire class) then revisit fundamental definitions, apply them to the problem, and derive the correct response together.

During this entire exercise, I constantly coach my students to believe that they have what it takes to succeed. I'll remind them that "freaking out" when reading an exam question is not an option. In overwhelming situations, I encourage them to remember the "wax on, wax off" principle, i.e., tune out the frills, and focus on the fundamentals. Once they believe like I believe, that is, they are fully able to succeed - they choose to succeed.

In my research, my students are my partners, although they are undergraduates. In the partnership, I am the major stakeholder - the one with the vision - while the students are extensions of me, executing experiments in my stead. With the help of my postdoctoral associate, Dr. Sainath Babu, I assign the students portions of the project. My team and I discuss the project's goal, repeatedly. Students discuss their progress with the team at weekly meetings. They are expected to present their experimental results in terms of theoretical content learned in their courses. Of course, at times memory lapses occur. Nevertheless, Dr. Babu and I remind students of Chemistry and Biology content that is pertinent to the project. (To be honest, at times the students end up teaching me Biology. Sshh!! Don't tell!!).

In order to maintain active research and teaching, I have to schedule EVERY MOMENT of my day! And let's not forget that my own children are not yet teenagers. All of this means that when I am at work, I must multi-task and give 100%, with schedule in hand. I rely heavily on partnerships, the most important being my partnership with my spouse. We coordinate schedules to the best of our abilities, and whenever our schedules won't synchronize, we rely on trusted friends and babysitters. At work, I have the wonderful support of a great team. My program manager and post-doctoral associate are also great at multi-tasking. I trust them to execute their assigned tasks and I do my best to validate their worth to me and my goal of empowering new generations to excel in STEM fields.

***In your view, what are some of the models which facilitate an effective teaching and research balance?***

Although uncertainty remains in scholarly circles on the effectiveness of professional development on teaching and student outcomes, two things are certain: (1) professional development is a must; and (2) institutions of learning continue to evaluate faculty in the categories of teaching, research, service, and sometimes, professional development. In my view, one will accomplish an effective teaching and research balance under the following circumstances: (1) ample provision of time, time management, and resources; and (2) the faculty member wishes to accomplish the balance. I would be remiss if I did not add that it takes a whole, healthy person to be successful at striking the balance for a long time. Unfortunately, for any number of reasons, “non-academic” factors that seem to be trivial, get ignored, causing the faculty member to be unsuccessful in striking the balance, or sustaining it. In other words, an effective faculty member needs time to take care of his/her physical and emotional health, and the like, in order to operate optimally. Otherwise, “the good die young”, and our children are left with the \_\_\_\_ (you fill in the blank. Hmmh.)

In addition, I have been learning about the [Boyer's Model of Scholarship](#) which broadens the definition of scholarship to include the scholarship of the following: (1) Discovery (traditional); (2) Integration; (3) Application; and (4) Teaching. Reports show that as institutions embrace this model, more faculty members participate in scholarly activities and receive appropriate recognition. Best of all (in my opinion), faculty members who operate within this model, demonstrate how to optimize time and space (i.e., infrastructure) as they become meaningful contributors to the advancement of knowledge. I look forward to learning more and practicing aspects of the Boyer Model.

***What is the role of student engagement in supporting your research? What are some exemplary initiatives of student engagement in your research program?***

I think it is exemplary that I trust my students to perform experiments and understand the fundamentals of their results. I know that they think that they shouldn't be trusted because they merely “did what they needed to do to pass the course” that pertains to my project. Nevertheless, because they know that I am counting on them, and that I am willing to help fill the gaps to the best of my ability, I think that they try harder to make meaningful contributions. Our weekly group meetings are also essential to student engagement. They provide a forum for enhancing presentation skills. They also provide opportunities to engage in discussion that sometimes gets animated as students defend their position on an experimental result. In these meetings, we discourage destructive criticism and encourage a true, hand-in-hand approach to answering scientific questions.

***How can the information on the above inform other faculty members about integrating their teaching and research?***

Honestly, I am in the process of learning how to integrate my own teaching and research. I am always dealing with a time crunch like a number of my colleagues. I worry about “how am I ever going to ...” like everybody else;

and so, I reach out to ANYBODY who will listen, and ask for help. It's surprising what gems we can gather when we admit that we need help. In the meantime, I encourage my colleagues (in the same way that I do my students) to recognize their true inner worth. I am not referring to the earned degrees and the conferred titles. I am speaking of their ability to accomplish ANYTHING that they want to do. Someone else has already done, or is in the process of doing what they wish to do; in this case, research and teaching. Someone has overcome the challenges that we currently face. Someone has had the time to develop a model (e.g., Boyer) that works. I think that it is worth it to STOP DOING WHAT WE'VE BEEN DOING WHILE EXPECTING TO GET DIFFERENT RESULTS THAN WE'VE BEEN GETTING, and to learn from another who has been successful in accomplishing the results that we desire.

## Announcements

### Call for Applications: 2014-2015 STIRS Scholars

As part of its [Scientific Thinking and Integrative Reasoning Skills \(STIRS\) Initiative](#), AAC&U will select as many as six faculty members to serve as STIRS Scholars. STIRS seeks to improve the capacity of undergraduate students to use evidence to solve problems and make decisions. Such capacities are foundational to general education and are critical for all students in all areas of study—the sciences, social sciences, arts, and humanities—if they are to become engaged and productive citizens.

During their term (2014-2015), STIRS Scholars will:

- Develop the first generation of STIRS case studies (See the [Call for Applications](#)).
- Provide valuable faculty and campus perspectives on STIRS strategies for curricular change and for wider efforts to increase attention to evidence-based reasoning in the undergraduate experience.
- Form a leadership cohort within an emerging community of practice comprising colleagues committed to improving evidence-based reasoning and decision making as an outcome of undergraduate liberal education.
- Help select and mentor a second cohort of STIRS Scholars chosen to begin in early 2015.

**Deadline for Application: Monday, January 6, 2014**  
**Announcement of Selections: Friday, January 17, 2014**

**Faculty members teaching in any undergraduate field at any AAC&U member institution are eligible.**

See the [call for applications](#) for more information about the STIRS scholars and about how to apply.

**Questions?** Contact Kevin Hovland, Senior Director for Global Learning and Curricular Change, at [hovland@aacu.org](mailto:hovland@aacu.org).

## **General Education and Assessment: Disruptions, Innovations, and Opportunities**

A Network for Academic Renewal Conference  
February 27–March 1, 2014  
Portland, Oregon  
**Register by January 15 for best conference rates.**

[General Education and Assessment: Disruptions, Innovations, and Opportunities](#) will examine how emerging disruptions in higher education are leading to positive opportunities for innovation in general education and assessment to improve the undergraduate experience for all students. The conference will feature innovations that go beyond a single program or campus, pedagogy or practice, and that show how tenure-track and contingent faculty, other educational professionals, community partners, and students are developing expanded paradigms for learning that matter for students, the workforce, and communities both local and global.

### **Featured Presentations Include:**

**From Disruption to Design: A General Education for 2030?**  
*Randall Bass*, Vice Provost for Education, Georgetown University; and *Sybril Bennett*, Associate Professor, Journalism, Belmont University

**Examining Leadership Paradoxes: New Students and Faculty on Campus**  
*Adrianna Kezar*, Professor of Higher Education, Rossier School of Education, University of Southern California; and *Robert T. Teranishi*, Professor of Education, Morgan and Helen Chu Chair in Asian American Studies, University of California–Los Angeles

**Leading Innovation and Institutional Transformation**  
*Ellen Junn*, Provost, San Jose State University; and *Anny Morrobel-Sosa*, Provost and Senior Vice President for Academic Affairs, City University of New York Herbert H. Lehman College

**Evolving Identities of E-Portfolios**  
*Bret Eynon*, Assistant Dean for Teaching and Learning, La Guardia Community College/City University of New York

**The Degree Qualifications Profile: Framing Learning Outcomes for General Education**  
*Holiday Hart McKiernan*, Chief of Staff and General Counsel, Lumina Foundation; and *Paul Gaston*, Trustees Professor of English, Kent State University

**Reflection for Innovation**  
*Terrel Rhodes*, Vice President for Quality, Curriculum, Assessment, and *Ashley Finley*, Senior Director of Assessment and Research—both of AAC&U

In addition to a full roster of concurrent sessions and plenary presentations, AAC&U also offers practical [Pre-Conference Workshops](#)—three hours of active learning with some of higher education’s leading innovators in developing strategies, practices, and policies that lead to student success.

Learn more about this [conference](#) and [register online](#).

For more information, please call 202.387.3760, or write to Siah Annand at [network@acu.org](mailto:network@acu.org).



## ***Inside Higher Ed* Webinar: Retaining Women in STEM Fields**

AAC&U is pleased to share this announcement on behalf of one of our sponsors, [\*Inside Higher Ed\*](#).

**Retaining Women in STEM Fields**  
**Monday, November 4, 1:00-2:00 p.m. (EDT)**

**An *Inside Higher Ed* Webinar featuring Joan C. Williams, Distinguished Professor of Law and the founding director of the Center for WorkLife Law at the University of California Hastings College of the Law.**

[Register with the discount code AACU1104 at check-out to save \\$25 off your registration price.](#)

Women are now well represented in science Ph.D. programs and (in some fields) in junior faculty ranks. But many departments lose women and end up without much diversity on their faculties. On November 4 at 1 p.m. Eastern, *Inside Higher Ed* presents Retaining Women in STEM Fields, a webinar featuring Joan C. Williams, Distinguished Professor of Law and the founding director of the Center for WorkLife Law at the University of California Hastings College of the Law. This webinar will explore why women leave and what departments, colleges and universities can do about it. Professor Williams will discuss:

- All the ways departments can save money by eliminating a chilly climate for women.
- The importance of family friendly policies.
- The way the right policies can avoid legal problems – and the wrong policies can leave departments and institutions vulnerable.

The webinar draws on work prepared for the Tools for Change Project, funded by a National Science Foundation grant. Williams is Co-PI on the grant together with Mary Ann Mason, Professor of the Graduate School and Faculty Codirector of the Berkeley Law Center on Law and Social Policy at the University of California at Berkeley, and the Association for Women in Science. The program is ideal for department heads, deans, academic affairs officers, EEO/AA officers and STEM faculty.

The webinar will consist of a 30-minute presentation and a 30-minute question period. There is no conference call required for this event—the entire presentation, including audio, is delivered via the web. You may gather as many colleagues as you like to view the webinar via one monitor, but only one login per registration will be allowed. PLEASE NOTE: You'll need [Adobe Flash Player version 11.2](#) or newer to view this webinar. This event will be captioned for the deaf and hard of hearing by SpeechText Access.

[Register with the discount code AACU1104 at check-out to save \\$25 off your registration price.](#)

### **ABOUT THE PRESENTER**

Joan C. Williams is a Distinguished Professor of Law and the founding director of the Center for WorkLife Law at the University of California Hastings College of the Law. She is the author of *Unbending Gender: Why Family and Work Conflict and What to Do About It* (Oxford University Press, 2000) and *What Works for Women at Work: Four Patterns Every Woman Should Know* (forthcoming NYU Press, 2014) with her daughter, Rachel Dempsey.

For more information, contact *Inside Higher Ed*'s Samantha Smith at 202.448.6143 or e-mail [audio@insidehighered.com](mailto:audio@insidehighered.com).