Profile of a Scientist: An Interview with Dr. Michelle Penn-Marshall

By Zina McGee, CTE Associate for Research

Dr. Michelle Penn-Marshall

In this issue, you will find the third in a series of three articles devoted to interviewing and profiling a few of the University’s Research Scientists who were asked to address the topic, “Integrating Teaching and Research.”

This month, I had the pleasure of interviewing Dr. Michelle Penn-Marshall, Associate Professor and Chairperson of the Department of Biological Sciences. Please 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?

Find what you love, and seek opportunities to incorporate your passion into your teaching and research activities. As faculty, we have the opportunity and responsibility to teach, conduct research, and serve the communities in which we live. I constantly look for ways to incorporate research into everything
that I do, including teaching and service.

With my research focus on obesity prevention and diabetes education, I have combined both my love for the topics and have sought to incorporate them in disciplines such as Nursing and Biology. This has been relatively easy to do, because I take advantage of opportunities to develop and teach new courses. For example, the Alternative, Complementary Nutrition Therapies Seminar course that I developed exposes pre-health professional students to alternative and complementary nutrition therapies. In the health information age in which we currently live, health professionals need to be knowledgeable of alternative and complementary medicine since many of their clients will use or have questions about non-traditional health therapies, such as Ayurveda, Manipulative and Body Based, Energy or Mind-Body Therapies.

Obtaining grant funding with my colleague, Dr. Sherri Saunders-Goldson, provided a platform for me to create and teach a service learning seminar designed to prepare nursing and other pre-health professional students to be culturally and linguistically competent health-care providers through their participation in community service that reinforced clinical skills and concepts. Students assessed the needs of the community while practicing their roles as pre-health professionals and community advocates.

In addition, Dr. Benjamin Cuker and I have taught a University 290 Honors seminar we developed entitled, “Eating for a Healthy You and a Sustainable Planet: Understanding the Personal and Environmental Consequences of Choosing your Diet” for the past four spring semesters. Students enrolled in this course investigate the impact of dietary choices on their own health and well-being as well as that of the environment. They learn the basics of nutrition, including how the food we eat is produced as well as the environmental consequences of food choices and production. By the end of the class, our students have made substantial changes not only in their dietary practices, but have become informed and responsible citizens with our earth’s resources. During the Spring 2013 semester, we incorporated a service learning project and the students chose to prepare, cook and serve a healthy breakfast at a soup kitchen.

As professors, our most precious resource is our students. The integration of education and research cannot be accomplished without service. Great educators and researchers display exemplary actions toward students, colleagues, and staff while working toward the goal of improving our environment and the lives of the community in which we live. There is a “symbiotic” relationship between research and teaching. Reversing the childhood obesity epidemic and eliminating health disparities such as diabetes through education and research continues to be my passion.

During my tenure at Hampton University, I have had the opportunity to work on several interdisciplinary grant writing teams with expert professors and senior administrators. Engaging in research with colleagues with such rich
and varied experiences sharpens your skills, helps you maintain deadlines, and gives one insight to other disciplines, including ways of approaching and solving research problems. Diverse points of view produce creative points of view. Simply stated, collaborate, collaborate, and collaborate! I have not found a colleague who was not willing to collaborate or assist in some way with a research project or the development of an idea.

Our entire Hampton University library staff has been extremely helpful. Mr. Frank Edgecombe and Ms. Peggy Brown have been instrumental in teaching my students how to search primary literature and have also helped me to obtain scholarly research articles. Additionally, Drs. Spencer Baker, Benjamin Cuker, Elnora Daniel, Bertha Davis, Edison Fowlks, Zina McGee, Pollie Murphy, and Patricia Sloan, have taught me so much about teaching and research. By simply listening to, and observing them, my ideas that were lying dormant surfaced. I highly recommend seeking out skilled academicians such as these; one will typically find that such individuals are willing to mentor.

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

While attending the Association of American Colleges and Universities’ *Preparing Critical Faculty for the Future Summer Institute* with Drs. Michelle Claville, Carolyn Morgan and Jean Muhammad this summer, I was introduced to “Ernest Boyer’s Model of Scholarship” (Boyer 1991) as outlined below:

**The Scholarship of Discovery** – Scholarly investigation, in all disciplines, is at the very heart of academic life, and the pursuit of knowledge must be assiduously cultivated and defended.

**The Scholarship of Integration** – The Scholarship of Integration is, of course, closely related to discovery. It involves, first, doing research at the boundaries where fields converge.

**The Scholarship of Application** – The application of knowledge moves toward engagement as the scholar asks, “How can knowledge be responsibly applied to consequential problems? How can it be helpful to individuals as well as institutions?” And further, “Can social problems themselves define an agenda for scholarly investigation?”

**The Scholarship of Teaching** – Great teachers create a common ground of intellectual commitment. They stimulate active, not passive, learning and encourage students to be critical, creative thinkers, with the capacity to go on learning after their college days are over.
What is the role of student engagement in supporting your research?

Students inspire me. Their questions kindle new research ideas. Therefore, student engagement is vital in supporting my research. I am committed to teaching students how to conduct research, while continually improving health outcomes through the promotion of educational and scholarly activities.

What are some exemplary initiatives of student engagement in your research program?

After being mentored by Dr. Pamela V. Hammond, I taught a grant-writing course to counseling and nursing graduate students. All students enrolled were required to write a grant proposal suitable for submission to a private or public funding agency. Mrs. Shevellanie Lott submitted and was awarded a $5,000 grant from the National Library of Medicine, because of the techniques she learned in this course. This was the first grant proposal she had ever written.

Ms. Vincentia Agbah and I implemented the Surry County Obesity Prevention and Exercise (SCOPE) pilot program with four senior undergraduate students who were experiencing academic difficulty in a lecture-based nursing research course. Each student indicated she benefitted from participating in this children’s obesity prevention research project because she was able to practice her nursing skills, while simultaneously learning how to conduct community research.

During the Spring and Summer of 2012, undergraduate biology majors enrolled in my BIO 408 and 505 Research Problems courses learned how to obtain children’s anthropometric measurements, seek approval from our University Institutional Review Board (IRB) and the public school system, request parental consent for children under the age of 18, and conduct responsible research in order to be equipped to implement the Surry County Obesity Prevention and Exercise (SCOPE) project. In addition, students enrolled during the spring semester created healthy snack pamphlets and a delightful children’s cookbook. Although these research courses were designed for biology majors, I granted permission for a computer science major to enroll in the course during the Summer of 2012. He in turn used his networking skills to solicit the help of a classmate who was a Scripps Howard School of Journalism and Communications major. The culmination of this interdisciplinary Summer 2012 research team resulted in an exercise video for children. The undergraduate biology majors convinced several of our university athletes to participate in the exercise video. These students not only learned how to conduct primary research, but they also learned the importance of interdisciplinary research.

Ms. Kristina Jiles, a graduate biology student and I are currently working on a review article on the “Effects of Childhood Obesity in African American Children.” We are also exploring the literature to include epigenetics, and two of the markers of inflammation, high-sensitivity C-reactive protein and
Interleukin-6.

Normal weight obesity informs an emerging self-image. To make their peers aware of this phenomenon, the students enrolled in my research class during the Spring of 2013 started the “Healthy You, Healthy HU” campaign. They organized the entire event. In one evening, they taught more than 65 of their peers how to measure their height, weight, and waist circumference and to calculate their Body Mass Index (a measure of obesity). They also taught their peers how to read nutrition labels and showed them how to track their dietary and exercise practices using applications on their telephones.

Our University Chef, Mr. Ashmere Spratley, volunteered his time and cooked dinner for each of the participants. The menu consisted of fresh green beans, hormone-free chicken breasts, and organic brown rice. The students were taught how to cook food with a small amount of extra virgin olive oil and how to season food with fresh herbs. Healthy low-sodium snacks and fresh whole fruit were also provided. Professor Beverly Duane and one of the undergraduate students enrolled in her class willingly gave of their time to teach a Pilates class to a room full of undergraduate students, Dr. Indu Sharma and her three-year-old daughter.

This semester, my research students created an extensive health assessment survey that is going to be distributed to their peers during the early Spring of 2014. These data will serve as a baseline of the health status of undergraduate and graduate students on our campus.

To expose students to the laboratory skills needed to conduct assays on the biochemical markers implicated in obesity and diabetes, I submitted an instrumentation grant proposal that will provide us with the necessary equipment to perform these assays. I envision nursing students drawing the blood samples and assisting the biology students in data collection, anthropometric measurements, and exercise and nutrition education.

My research areas continue to be interdisciplinary; a common theme is my desire to improve the quality of life for others. Whether it is through providing educational opportunities, research training or eradicating chronic diseases such as diabetes and childhood obesity, I will continue to use my scientific knowledge to serve others while training the next generation of scientists, health-care providers and community leaders. I will also continue to look for ways to engage students, colleagues and the community. Innovation comes from research and leads to an improved quality of life. We must remember that our research footprint must extend beyond our borders and reach our communities. We cannot afford to squander one of our most valuable resources, “our students.” Research not only enhances the experiences of students, it provides an opportunity for more interaction with faculty in a nontraditional classroom setting.
How can the information on the above inform other faculty members about integrating their teaching and research?

I encourage my colleagues to remember to utilize the rich talent pool that we have in our undergraduate and graduate students, and to volunteer to teach research and interdisciplinary courses. Remember where your passion and interests lie and stay excited about them. Your energy will constantly be renewed when there is an exchange of ideas between you and your students.

References


Announcements

**AAC&U's Institute on General Education and Assessment: Applications Due February 14**

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June 3-7, 2014
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**Apply through February 14, 2014**

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Drawing from what is learned over the course of the Institute, each team will develop an action plan for continuing the team’s work upon return to the campus. Action plans address strategies for next steps, relevant stakeholders to engage, and a timeline for achieving goals.

Learn more about the Institute on General Education and Assessment online. For additional information, contact Alexis Krivian at 202.387.3760, ext. 404 or e-mail Krivian@aacu.org.

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Learn more about the Institute on High-Impact Practices and Student Success at [www.aacu.org/summerinstitutes/hips](http://www.aacu.org/summerinstitutes/hips).

For additional information, contact Kara Hawkesworth at 202.884.7407 or e-mail [hawkesworth@aacu.org](mailto:hawkesworth@aacu.org).

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Teams applying to the Institute each propose an educational change project specific to their individual institutions, and commit to develop and support faculty leadership for student learning. Teams will leave the Institute having developed action plans for achieving their specific goals. Expert faculty and other teams will provide initial feedback on the plans at the Institute.

Learn more about the Institute on Integrative Learning and the Departments at [www.aacu.org/summerinstitutes/ild](http://www.aacu.org/summerinstitutes/ild).

For additional information, contact Chad Anderson at (202) 884-7429 or e-mail [anderson@aacu.org](mailto:anderson@aacu.org).

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