

When Statistics Called: Jamaican scholar’s journey to PhD in UK





KINGSTON, Jamaica — What began as an interest in statistics has taken one Jamaican researcher from lecture halls in Kingston to presenting on the international stage and ultimately earning a PhD in the United Kingdom.

Danielle Notice, who recently completed her doctorate at Lancaster University, said her academic journey started while pursuing a bachelor’s degree in actuarial science at The University of the West Indies (UWI), Mona.

“I did my undergrad at UWI. I studied actuarial science, a very maths-heavy degree, and some of my favourite courses were the statistics modules,” she recalled. “So, after my undergrad, I actually decided I didn’t want to be an actuary.”

Instead, after completing her bachelor’s degree in actuarial science in 2019, she pursued a master’s degree in statistics with data science at the University of Edinburgh, where she discovered the field she wanted to build her career around.

“That’s when I truly realised this is a field I could definitely see myself working in,” Notice said.

Her master’s experience broadened her understanding of statistics while exposing her to real-world applications.

“It was very interesting. There were areas of statistics that I never even knew existed before doing that master’s degree, so a lot of it felt like I was thrown into the deep end, but I still found it quite enjoyable,” she said.

The programme, which had about 150 students, focused heavily on practical applications through consultancy-style dissertation projects.

“We were specifically looking into applications as opposed to thinking about more theoretical approaches and methods, so I always found the application side of things more interesting.”

Despite studying in a large, international cohort, the 28-year-old stood out in more ways than one.

“Part of me was a bit surprised not only being the only Jamaican but being the only black person in my cohort,” she said. “It was also a very international programme, so there were a lot of students from all over Europe and also all over Asia, so I wasn’t the only one who was trying to figure out a new culture.”

Her time in Edinburgh was also shaped by the coronavirus pandemic, with the latter half of her studies taking place during lockdown.

“I think I managed to fare all right. I did have big plans of doing all of my exploring in the spring and summer when the weather is nice. But in the spring we were all inside.”

She said technology helped maintain connections as people relied heavily on online communication.

“Online communication just became a bigger part of my life once the lockdown started, so I think I fared all right.”

After completing her master’s in 2020, she returned to Jamaica and worked for a year before beginning her doctoral studies at Lancaster University.

At Lancaster University, Notice joined the STOR-i Centre for Doctoral Training, where the first year of the programme functioned as another master’s degree, exposing students to a broad range of research areas before they selected their doctoral projects.

“The first year ended up being another master’s degree where we were exposed to a lot of different research areas, both in statistics and operations research, some of them I had never been exposed to before,” she explained.

Her cohort consisted of just 10 students, allowing for closer collaboration with lecturers and supervisors.

By the end of the first year, students selected their research projects and supervisory teams.

“More than the topic itself, having supervisors that you work well with seems to be a big element of whether or not your PhD experience will be good or if you will manage to finish on time.”

Notice eventually chose a project titled Models for Algorithm Selection for Combinatorial Optimisation Problems, which was partly sponsored by Tesco Ltd and motivated by the retailer’s business needs.

Explaining her research in simple terms, she said combinatorial optimisation focuses on identifying the most efficient way to solve problems involving many possible choices.

“I looked a lot at routing problems, so how can you schedule for a truck to visit different stops and warehouses and be efficient,” she said.

“There are a lot of different processes or algorithms that can be used to effectively and efficiently to solve those problems. So my project was looking into the methods for choosing the best way to do something and also presenting that information in a way that is useful to the people who will actually be making decisions.”

Notice credits her supervisors with helping her navigate the challenges of research.

“While doing my PhD I was still learning to do research and my supervisors helped me to figure out the best way to go about it. With their expertise and experience they might know approaches or areas of research that make more sense to go into versus others.”

Although the research was an individual undertaking, she said their guidance proved invaluable.

“I had two supervisors with opposite but complementary areas of expertise, so that really worked out.”

Like many doctoral candidates, Notice encountered significant setbacks, particularly during her second year.

“During my time, there were people higher than me who would always say, ‘During your second year everyone hits a wall.’ That definitely was true for me.”

She recalled having to discard three months of work after realising she had made a major error but support from her supervisors and fellow students helped her push through.

“There were other times where what I thought would be interesting would just be pretty ‘meh’ or not really worth looking into, but it was good having other small victories along the way.”

She added that being part of a cohort made the experience easier because everyone understood the challenges involved.

As she approached the finish line, Notice completed three related research projects, which formed the basis of her final thesis. She laughed as she recalled one of her final meetings.

“I was saying, ‘I’m going to go back and add this. I’m going to change that,’ and they stopped me and said, ‘Danielle, you can literally put it in, tie it together and it’s done.’”

Beyond the academic milestones, Notice said the experience offered opportunities she had never imagined.

An important benefit of the STOR-i programme, she noted, was funding that enabled her to present her work internationally.

“I was able to attend three academic conferences to present my research.. in the USA, Northern Ireland and Spain. I also applied for and was awarded extra funding to stay in Australia for a few weeks to work with some experts in my field.”

Reflecting on the journey, she said success required much more than academic ability.

“The whole process can be quite intense, but I was very fortunate to have a really good community both within my programme, but also in Lancaster with my church, and my family and friends from home. I definitely needed the support.”

For aspiring doctoral students, Notice has simple but important advice.

“Don’t take your supervisors for granted and be okay with things changing.”

