

Studying Abroad during the COVID-19 Pandemic: The Experiences of Three African Women
PhD Students

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Abstract

International students have faced unique challenges during the COVID-19 Pandemic. This essay shares three stories from African women doctoral students who are scholarship recipients under the Regional Scholarship and Innovation Fund. They are conducting cutting-edge research in Science, Technology, Engineering, and Mathematics (STEM) towards their PhD degrees and have found themselves in a foreign land during the pandemic. Their stories illustrate the pandemic's impacts on their personal lives and research productivity and their immense resilience in the face of challenges brought on by the pandemic.

Keywords: Africa, COVID-19 pandemic, doctoral studies, STEM, women students

Studying Abroad during the COVID-19 Pandemic: The Experiences of Three African Women PhD Students

They found themselves in a foreign land during the Coronavirus Disease 2019 (COVID-19) pandemic. Scholarship recipients under the Regional Scholarship and Innovation Fund (RSIF; <https://www.rsif-paset.org/>), these African women scientists are conducting cutting-edge research in Science, Technology, Engineering and Mathematics (STEM) towards their PhD degrees. RSIF has a recruitment target of 50% women among its scholars, and the program includes a “sandwich” placement at an international partner institute where they conduct part of their research and expand their international networks while receiving expert supervision in their field. As the reality of COVID-19 hit, interrupting lives and causing universities and research laboratories to close, the students were met with uncertainty as plans were put on hold. Working from “home” became the new normal. Far from their home countries and families, the students have faced unique challenges. Their stories illustrate the impacts on their personal lives and research productivity and the resilience these women have shown during the COVID-19 pandemic.

Scholars Share Their Experiences during the COVID-19 Pandemic

Scholar 1, PhD candidate in Material Sciences and Engineering-Mineral Processing, African University of Science and Technology, Nigeria and Worcester Polytechnic Institute (WPI), Massachusetts USA.

The COVID-19 pandemic has had immeasurable effects on my research productivity. For me, a doctoral candidate living abroad with my three-year-old daughter since October 2019, an immediate impact was felt with the closing of schools and childcare facilities. With my husband in China pursuing his PhD and unable to travel to the U.S. due to entry restrictions related to the pandemic, I am my daughter’s sole caregiver for now. The closing of laboratories, libraries, and offices at Worcester Polytechnic Institute (WPI), the institution of

my sandwich training, has also interrupted my laboratory work and the writing of my journal manuscript. At the time of lockdown, I was at the beginning of my laboratory analysis and had made good progress, but I had not yet collected enough data to finalize a manuscript.

During the COVID-19 lockdown, with the closure of childcare facilities, it has become far more challenging to balance academics with being a full-time mother. Finding the time and space to read, think deeply, and write is difficult, to say the least. Recently, I had to give an online presentation of my research and found it very hard to concentrate and do well with my daughter demanding my full attention in the background. I cannot afford to buy a lot of toys, and my daughter is confined during the day to my bedroom, due to the need for social distancing with our apartment mate. With the pandemic, I now worry more about my wellbeing and that of my daughter, my husband, and my family and friends back home. My morale has suffered, and I am often distracted by the urge to be updated on the current status of COVID-19.

In my home country of Rwanda, our leaders often remind us “Intore ntiganya ishaka ibisubizo,” which means that in difficult times we should seek out solutions rather than complain. I am now frequently reminded of this saying. To stay on track with the PhD and take care of myself and my daughter during the pandemic, I have tried several strategies. I have established a daily routine, where I work as much during my usual work hours as my daughter allows. I change hats between mom and researcher throughout the day, giving her my full attention during playtime, and taking advantage of her nap time and early bedtime for four hours of uninterrupted research time. Every workday, I start by reading articles for inspiration and then proceed to manuscript writing. I start with the easier manuscript sections, leaving the harder parts for when I am warmed up. I write no matter what, knowing that even if it is difficult now, I can edit for improvement later. I do a daily evaluation of progress. I remind myself that getting a PhD takes time and I need to stay motivated, enjoy the process,

and practice self-care. I regularly participate in virtual meetings with my research group and supervisor, to stay connected with my colleagues, share strategies for research productivity, and stay focused.

We Rwandans greatly enjoy socializing with friends and attending parties, weddings, and other social gatherings. We generally spend a lot of time with others. But this is not possible now: I am living far from home and there is need for social distancing. I think my experience living in India, where I pursued my MSc, has helped me adjust. I remember the culture shock I felt upon finding that in India people are not used to shaking hands and rarely hug each other as a form of greeting. That is so different from how people greet each other in Rwanda. But I adapted to the different ways of doing things in India, and I am adapting now to the pandemic. I am less social now, even maintaining social distancing with my apartment mate, and I have strengthened my daily hygienic routine, like washing hands with soap frequently.

I have learned some valuable lessons during the pandemic, like how unpredictable life can be and the importance of being prepared. Some of my family members back home have lost their jobs, and I am relied upon to support them, reminding me of the importance of saving whenever possible for those unexpected hard times. I now know that early time management is key to success in academics and that mental health is a major problem in academia, not to be ignored. Having a committed mentor who can provide professional guidance and moral support is so important, I have learned.

WPI is trying to reopen some laboratories for researchers. Unfortunately, however, since my daughter's daycare center has not yet reopened, I will not be able to resume laboratory work right away. I know, however, that when schools and laboratory activities resume, my hard work and perseverance will be rewarded, and I will complete my PhD with good results and go back to put my new skills to work towards the development of my country Rwanda, which has supported my training here in the US through the RSIF.

Scholar 2, PhD candidate in Biotechnology, Sokoine University of Agriculture, Tanzania and Korea Institute of Science and Technology (KIST), Republic of Korea

I am a doctoral student of the Sokoine University of Agriculture on a sandwich placement at the Korea Institute of Science and Technology (KIST). When South Korea experienced its first wave of COVID-19, my research productivity was immediately impacted due to the need for social distancing. Meetings with my supervisor had to be postponed, and many seminars, conferences, and workshops were cancelled. Limited communication with other researchers slowed my progress. I found myself questioning the value of my research, and it became harder to keep up with the latest trends in my field.

Fortunately, research facilities at KIST have remained open throughout the pandemic. Initially, for about four months, working hours were temporarily changed to allow for social distancing, with some staff assigned the 6:00 am to 2:30 pm shift, and others assigned the 3:00 pm to midnight shift. The Institute has taken many efforts to enable research to continue, while keeping researchers safe. KIST provides masks, sanitizers, and cleaning tissues/wet wipes. The Institute continuously shares with its researchers the latest news on the location of new COVID-19 cases and other critical information, conducts daily temperature checks, and gives frequent reminders of safe practices. I am in awe of how well KIST and South Korea have responded and fared during the pandemic.

Living away from my family during the pandemic has been very hard. My husband and three-year-old son are back home in Kenya. I miss them so much! I doubt I will be able to see them soon, given travel restrictions, closed borders, and reduced flight operations. I often worry for their wellbeing. I follow Kenyan news, and the rise in COVID-19 cases troubles me. My husband is a medical technologist, and is therefore at higher risk, so he is living in hospital staff quarters to avoid exposing our son to COVID-19. It is difficult not to be overwhelmed by thoughts about their safety and the effects on my child of parental

absenteeism.

Leo Tolstoy once said, “Everyone thinks of changing the world, but no one thinks of changing himself.” I am working to change myself by accepting the new normal and making the most of the time left on my doctoral scholarship. For example, I am learning how to maximize the use of available communication technologies that I already know, as well as adopting and gaining proficiency with new ones. I continue to learn from and collaborate with my supervisors and colleagues while we are apart thanks to various available platforms, such as video meetings/conferences and webinars. I have also embraced the use of applications to remotely access the laboratory and office desktops to retrieve information and data. Although these have been convenient in enabling social distancing, they do come with concerns of security risks. In these times it is critical to invest in the latest technologies, which previously I was very skeptical about.

Most importantly, I recognize the need for steady progress in my doctoral studies. I now understand why doctoral students contemplate leaving or even choose to walk away from their studies. The real challenge in obtaining a PhD is not getting enrolled; the major hurdle to overcome is meeting all the requirements to complete the PhD, which requires a lot of stamina. The pandemic has made it even harder to finish the PhD. I have had to become far more patient and persistent, compared to when I started this journey. Regular progress has become my most important goal, and I have made changes to realize this goal. Establishing and sticking to a new work routine has been key. There are various interferences that occur while working away from your normal workstation, especially working from home. However, working with a structured day and continuously updating my to-do-list help me overcome distractions and complete projects on time. In addition, on the days/shifts I access the laboratory, I try to create a balance for utilizing what I perceive as my free extra hours to achieve more and compensate for shifts when I am not allowed to access the facilities.

I have had no choice but to tolerate some of the negative aspects of the pandemic, like separation from my husband and son and reduced access to my workstation and laboratory. But I at least feel some satisfaction with the changes I have made to myself during the pandemic, which have allowed me to continue learning, adapt to the changing circumstances, and make progress in my doctoral work.

Scholar 3, PhD candidate in Computer Science, University Gaston Berger (UGB), Senegal and Worcester Polytechnic Institute (WPI), Massachusetts USA.

I find it hard to believe how much has happened over the last nine months. When the COVID-19 pandemic began, I was still acclimatizing to the weather and life in Massachusetts, USA. I was really missing my home in Senegal. I used to take care of my younger siblings and support my mother, and I had left my fiancé behind. I came to Worcester Polytechnic Institute (WPI) as a visiting scholar with the intent of completing my research work as quickly as possible, so I could resume my family responsibilities and contribute to Senegal's development through research and education. Unfortunately, my academic progress has now been delayed by the pandemic.

In computer science, it is important to build a theoretical basis for IT applications. However, more critical is to establish a proof of concept to validate my theoretical models, and for my work this requires an advanced laboratory and hardware. My research group was in the process of setting up a test environment for the practical phase of my PhD when COVID-19 erupted. But it has now been over five months since I had access to the research lab. When the lab reopens, which is scheduled for August 2020, my research may continue to be impacted. For instance, it now takes several months to receive orders of basic materials for building our testbeds. Fortunately, I have been able to continue with some theoretical assessment by running simulations remotely, thanks to online access to campus servers for running resource-consuming projects. WPI also provides free access to research software.

Like many, I find it hard to strike a balance between my work life and personal life, while working from home. On the one hand, I have greater flexibility in structuring my days, as I can, for example, fit a dental appointment in between conference calls and research during the workday and continue working at night. On the other hand, working remotely negates the key justification for being physically in the US. I try not to get overwhelmed by what is going on in the world by taking time to do things I enjoy outside of work and regularly communicating with families and friends. This helps a lot.

Planning my daily PhD tasks and having regular online meetings with my supervisor have made a big difference in keeping me on track with my doctoral studies. I sometimes hesitate to schedule these meetings, worrying I have little research progress to report. But I always leave these sessions with a clearer idea of the next research steps. Online collaboration with my research group and participating in scientific webinars also helps keep me motivated. And I do my best to keep up with changes in my research area by reading online journals and having discussions with my lab mates. I eagerly await the time when I can access the labs, get materials for my research in a timely manner and finish the practical phase of my PhD.

Conclusion

While this piece draws on the experiences of only three women international doctoral candidates, their stories help illustrate how COVID-19 is differentially affecting the work of scientists. A recent survey found that scientists who have experienced the largest decline in their research time during the pandemic are women, those with young children, and scientists in fields that rely on physical laboratories and time-sensitive experiments (Myers et al., 2020). The three women scientists profiled here are all heavily reliant on laboratories and time-sensitive experiments for their work, although Scholar 2 is less disadvantaged in this respect since there has been minimal loss of laboratory access at KIST. Scholar 1, who is

currently the sole caregiver of her young daughter, describes how the ability to devote time to her research, especially manuscript writing, has been substantially affected by the closure of childcare centers. The pandemic has directly impacted her research productivity. But it is likely that the work of Scholar 2 is also impacted by her strong caregiving role as a mother of a young child, although indirectly given her child is geographically distant. Indeed, the three scholars all face psychological stress associated with the pandemic: being in a foreign land in a time of tremendous difficulty and uncertainty, worrying about the health and financial well-being of their loved ones and themselves, and seeing their future plans (e.g., a wedding, being reunited with their husband and child) thrown into uncertainty. Stress has been shown to negatively impact research productivity (e.g., Blackburn & Bentley, 1993).

Each of the scholars profiled in this piece has shown resilience during the pandemic. Nevertheless, their stories highlight the need for universities, funders, and journals to identify and implement supportive measures for women scientists, early-career researchers, and international scholars whose current research productivity and future science careers may be at risk. A promising supportive measure being implemented by some research funders is the provision of extra funding to retain promising scholars with strong caregiving roles, which allows these scientists to hire a technician or research coordinator and thereby reclaim time and maximize their research productivity (Gewin, 2020). One approach that journals can use to support women and early-career researchers is to put their papers at the front of the manuscript review queue, as is being done by *International Journal of Urban and Regional Research*. RSIF has made efforts to keep its 82 scholars on track to PhD completion during the pandemic by offering online versions of its orientation program and trainings in essential science skills. RSIF is also providing psychosocial support through a series of webinars focused on mental health issues and suggested coping strategies. Interventions like these and many others will be critical to ensure that the COVID-19 pandemic does not result in the

erosion of the hard-won gains in gender equity in science of the past few decades or prevent young African women scientists from being key players in the rising tide of African science.

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