Five Days in Nigeria: A Workshop

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A blast of hot air welcomed us as we stepped off of the plane onto the tarmac under the setting Nigerian sun. A group of Americans and Europeans, we were just becoming accustomed to the cold weather of late November in our home countries when we made a brief expedition to Abuja, the young, ever expanding capital city of Nigeria. Our group consisted of several civil engineering professors, many head’s of their respective departments at their universities; engineering professionals; and civil and architecture engineering students. Our goal on this trip was to partner with Nigeria’s universities to help them develop sustainable engineering practices and educational systems for training the engineering students of today to meet the various crises they will face tomorrow; we were funded by the National Science Foundation and supported by many universities and the American Society of Civil Engineers (ASCE) and its Global Center of Excellence in Computing. We would host a three-day workshop with Nigeria’s National Universities Commission (NUC) in which members of our team and the NUC would make various presentations to Nigerian professors and students about sustainable engineering and engineering education methods. The workshop would also afford opportunities for collaboration of ideas for future cooperation between Nigeria’s universities and those in the rest of the world.

“I told you Nigeria would treat us well,” Dr. Tomasz Arciszewski of George Mason University (GMU) said to me as we walked towards the Nigerian customs and immigration, apparently appreciating the benefits of warm air over those of cold. An unassuming man, Dr. Arciszewski lived in Nigeria as a young man, working as a professor at the University of Nigeria, Nsukka, after fleeing communist Poland as a refugee. For him, this trip was something of a homecoming, a time for him to remember the kindness shown him by this country. He came, though, prepared to give back to this nation. Despite his unassuming and gentle nature, Dr. Arciszewski is a visionary in the engineering field. He is a strong proponent of what he calls “whole-brained thinking,” which in essence breaks the barrier between the analytical, logical, left-brained thinking style—traditionally associated with engineers—and the feeling, creative style of right-brained thinking generally associated with artists and merging them together to bring about something magical: innovation. In a sense, developing innovation was the entire point of our trip. In the opening ceremony of the convention, the need for innovation in both the United States and Nigeria was heavily stressed, as neither country
will be able to meet future domestic engineering needs or stay abreast of the global engineering market without a large, immediate dose of innovation.

Professor Chimay Anumba, the chair of Pennsylvania State University’s Department of Architectural Engineering, a native Nigerian, and our fearless leader, helped us navigate through customs, and soon we were safely and happily in our hotel. We were delighted to find that each room had working air conditioning units, albeit the units were somewhat confusing to operate for those un-initiated to African culture. Regardless, we all went to sleep, ready to arise for day one of our convention. The bus would arrive at 8:30 in the morning to take us to the opening session at 9:00…

Or so we thought. As if to welcome us to Nigeria and introduce us to what came to be affectionately or otherwise known as “Nigerian time,” the opening ceremony did not begin in earnest until around 11:00 the next morning, and this became a pattern for the rest of the conference. Apparently, innovative engineers need to be flexible engineers while in Africa, at least as far as schedules go… However, the conference eventually began, and several excellent presentations were made in which the need for innovation and creativity in the Nigerian context was discussed and ways to implement innovation were debated. Our team learned about some of the particular challenges facing Nigeria, which include poor power and water infrastructure and housing issues. Nigeria continues to remain a poor country, despite the vast natural resources it contains. However, despite the difficulties it faces, Nigeria is a hopeful country. One of the country’s goals, known as “Vision 20-2020” states that by the year 2020, Nigeria should be in the top 20 economies of the world. In order for this to happen though, innovation must be infused into the Nigerian University system. The first day of the conference contained several informative sessions on the state of Nigerian universities and on sustainable engineering technologies and methods that are currently being implemented in the developed world. Several questions were posed by Nigerian participants at the end of the sessions, showing that the Nigerian professors on the ground level, not just in the upper levels of the government, were ready to participate in developing innovative practices. The first day of the conference ended after a presentation about the poignant dangers facing the world if creative action is not taken to solve our environmental problems.

The second day began in similar fashion to the first, though this time the starting delay was significantly smaller than that of the previous day. Several important issues were discussed, with one of the most important being the crucial role that Nigerian universities play in bridging the digital gap that exists between actual acquired knowledge and the
application and distribution of that knowledge. Another issue that surfaced is the apparent lack of value for knowledge and information in the Nigerian context; in many ways, Nigerians tend to think that if they cannot touch something, see it, or sell it, then it must not be valuable, and so the value of much knowledge and research is discounted. Universities must use the internet and other digital mediums to disprove this belief by distributing the knowledge they already have in the pursuit of more. Other presentations dealing with engineering education techniques, computing and engineering, and building information modeling were also made, rounding out the second day of the conference.

After all presentations and discussions were finished, our team traveled to a local market where many souvenirs were purchased after much bartering, and then half of the team attended a dinner at the Nigerian Senate President’s home while the other half journeyed to a local fish restaurant to get a taste of the local community. At the fish bar, we were welcomed with Nigerian hospitality, as one of the local gentlemen offered to give his girlfriend to one of the males on our team in exchange for one of the women on our team! Needless to say, our team stayed intact without the loss of any of our members or the addition of any locals…

The third and final day of the conference was spent in a large group discussion and in touring local Nigerian infrastructure systems. The purpose of the group discussion was to discuss future collaboration opportunities between the institutions represented by our team and Nigerian universities. Mr. Mike Sanio, the ASCE Director for International Alliances, recommended the development of a student exchange program in which American and other foreign students conduct research at Nigerian universities and in which Nigerian students do the same at American and other universities, an idea which was seconded by the author of this article. Mr. Sanio recommended using models that ASCE already has with other universities in the developing world and with which he is very familiar. This exchange of students and, hence, knowledge, would increase the value of knowledge in Nigeria. The possibility of introducing Engineers Without Borders (EWB) into the Nigerian context was also proposed by Mr. Jim Milliken, a GMU student on our team and the founding president of GMU’s EWB chapter, and this idea was warmly received.
After the discussion was completed, our team made a foray into the Nigerian countryside to Abuja’s drinking water reservoir and for a tour of its water treatment facility. Then, we traveled back to Abuja for a tour of the city’s waste water treatment plant, a state-of-the-art facility kept in top condition. Finally, we ended the day with a special cultural night with NUC officials. There was delicious local food and, even more impressive, local dancers. It was an evening worth remembering, as many members of our team were happily obligated to join in the dances; it is safe to say that the Nigerians were much better dancers than any members of our team.

Our final day in Nigeria, after the conference ended, was spent visiting the U.S. Embassy, where we learned about more opportunities for research and collaboration between Nigeria, the United States, and other countries represented on our team. We then made one more foray to the local market, went back to our hotel and gathered our belongings, and departed from Nigeria, each to our respective homes.

Members of our team dancing with the Nigerians

In the end, this trip was a great success that will yield great future benefits for Nigeria, the United States, and all other countries involved. Despite the heat and the lack of precise scheduling due to “Nigerian time,” our time in Nigeria served as an opportunity to assess the Nigerian university system and look for future collaboration opportunities to develop innovative engineering in the world. One of the most immediate practical results that will hopefully take place is the exchange of students and information between Nigerian and American universities. Currently, the NUC holds memorandums of understanding (MOU’s) with some American universities, including GMU. However, these
MOU’s have accomplished little until now; soon, though, universities and academics from institutions from both nations will be collaborating to develop innovative, sustainable engineering and education techniques that will serve both countries, and the world at large, for many years to come.