INTERVIEW WITH SEAN HOGAN, ROTARIAN AND PARTNER WITH BUCKLEY HOGAN LAW OFFICE

Interview conducted by Quentin Wodon
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EXCERPTS:

- "ARES is an acronym for the African Ruggedized Education System and a solution for the problem of education in rural communities with minimal resources. […] ARES operates like the internet in a box [with] educational resources from pre-school to post-grad, including thousands of video tutorials and books, the entire Khan Academy curriculum, STEM resources, over 300 TED Talks and the massive educational Wikipedia library. […] Students access ARES through basic, inexpensive laptops."

- "Technology isn't a solution on its own and the success of the program requires that we build partnerships (both at home and internationally) and that we train and work with local technicians and teachers."

You have been active in Rotary, including with the ARES project in Kenya. What is ARES?

The philosophy behind the ARES Project is: If you truly want to change the world, you begin by educating the children. ARES is an acronym for the African Ruggedized Education System and a solution for the problem of education in rural communities with minimal resources.

Remote rural schools often have limited access to books, paper and writing materials, as well as intermittent power and no internet access. ARES is a server-based system that provides remote rural schools with educational materials from pre-school to post-grad.

To fully understand ARES, I need to review the history of the project. Bonnie Sutherland is a member of my Rotary club. In 1992, she and her late husband, Don, visited Africa and saw the great need for teachers and students. Don and Bonnie were both teachers and began shipping containers of books and other materials to Africa. That led to the formation of the Afretech Aid Society, and to working with Rotary clubs to send larger and more frequent shipments, which grew to include entire libraries, computers, medical equipment, and more.

Box 1: Interview Series

What is the mission of the Global Catholic Education website? The site informs and connects Catholic educators globally. It provides them with data, analysis, opportunities to learn, and other resources to help them fulfill their mission with a focus on the preferential option for the poor.

Why a series of interviews? Interviews are a great way to share experiences in an accessible and personal way. This series will feature interviews with practitioners as well as researchers working in Catholic education, whether in a classroom, at a university, or with other organizations aiming to strengthen Catholic schools and universities.

What is the focus of this interview? In this interview, Sean Hogan, Rotarian and partner with Buckley Hogan Law Office, discusses some of his experiences with digitalization in education. The interview is part of a series on that topic.

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Bonnie would take some Rotary members with her on these projects and I was interested in working on an international service project. I asked if I could go on one of her trips to Kenya - my first trip was 2009. I am an amateur tech so I looked after the computer labs - individual PCs running Windows 95 at the time. We set up several of these labs over the next few years, but were frustrated that when we returned to check up on the labs, most of them were not working well. Users had downloaded programs (some of which had viruses, others which slowed down the computers) and we had theft of mice, keyboards, and internal parts. We were spending a lot of effort on return trips to get the labs back up and running.

In 2011, we were joined by another Rotarian, Mark Knittel, for a project in Kenya to install a computer lab in a community library. Mark has an extensive background in technology, including 20 years with IBM in the US and France, before moving to Bellingham. Learning about the problems with intermittent power, power surges, dust, heat, downloads, viruses and theft, Mark was determined to find a better way to provide a computer-enhanced education model. Mark created a small server that would be rugged to deal with heat, dust, and power issues. That prototype was used in the first Kenya test project in 2015. The case is designed to prevent dust intake, while the components minimize heat issues. The ARES server can be charged overnight and will run on a battery - so that if the school loses power, the system still operates.

Teachers could literally hold a class under a tree in the middle of a field. Working with other charitable groups which create digital educational resources, Mark stored educational data on a solid state hard drive (SSD) so that ARES operates like the internet in a box. ARES has educational resources from pre-school to post-grad, including thousands of video tutorials and books, the entire Khan Academy curriculum, STEM resources, over 300 TED Talks and the massive educational Wikipedia library. ARES also has agricultural guides and medical reference material to serve as resources for the entire community.

Students access ARES through basic, inexpensive laptops, such as Chromebooks, as well as through existing school computer labs, tablets, smartphones and any other wireless device. Up to 50 wireless devices can connect to the ARES server at a time, with each user able to access different resources on the server. The ARES system includes one server, a minimum of 20 laptops, a digital projector, speakers and earbuds. Everything runs on batteries - so if the power goes out, the class can continue working for the rest of the school day. The teacher can use the projector for group sessions, and allow independent learning for the students.

If a student has downloaded a virus or done something that causes a problem for the laptop, it never affects the server, and no other user is affected. To the users, it may appear that they are accessing the internet - but they aren't. Everything is on the server and the data is both safe and appropriate for students. I should add that, in addition to the ARES Project, our work in Kenya includes medical clinics and setting up libraries in primary schools.

What has been challenging?

Let me give you an example of a lesson we learned early on. One of our requirements is that every school is required to build a locked storage room to minimize the risk of theft. At our very first school, a former student broke into the locker and stole the server and laptops. Fortunately, the teacher had installed tracking software on the laptops, so when the thief turned one of them on, she was able to contact the police, who made the arrest and recovered all of the equipment. That taught us to improve our security with sleeve type locks and to install tracking software on all laptops.

Technology continues to change, and more and more resources are becoming digital - which means that ARES needs to adapt and grow. Technology isn't a solution on its own and the success of the program requires that we build partnerships (both at home and internationally) and that we train and work with local technicians and teachers. We have been concentrating our efforts to a District in central Kenya. Each year, we have a meeting with representatives from each of the schools that have an ARES system so that we can train and get feedback, and obtain statistically significant information to improve all elements of the ARES Project.

The ARES system is designed to last for 7 years before the server or laptops need to be replaced. Each year we provide a USB with updates so that the local technicians can easily insert the USB into the server and it will upgrade automatically. One of the unexpected issues we encountered was laptop batteries. Teachers would plug in the laptops and other devices every night so that they would be fully charged for the next day. However, the laptops were left unplugged during the summer vacation and, two months later, had fully discharged and would no longer hold any charge. We replaced the batteries and now are more careful in choosing better quality laptops

and/or having the laptops be recharged on a regular basis during long break periods.

What do you think more generally are the opportunities from digitalization for K12 education?

The primary opportunity is the wealth of material available for teachers and students. There are professional textbooks from kindergarten to the 12th Grade (with a separate set with answers and lesson plans for teachers in a separate section), thousands of teaching videos, educational games, virtual science labs, a school Wikipedia, over 45,000 downloadable books and much, much more. As the content is digital, we can add and update material very easily - including material in the local language. This gives students in remote, rural schools as much educational material and tools as students in wealthy, urban schools. ARES levels the playing field and allows any student - no matter how poor and no matter where they live - the same opportunities to succeed. And all of the material is available on the local server. They are not reliant on the internet and all content is safe, accurate, and educational. There are no connections to radicalized sites, pornography, or other harmful or wrongful websites.

And what do you see as the main challenges?

Many if not most teachers in small rural communities are not familiar with laptop technology. That generates fears of not being able to teach using technology as well as concerns about being redundant if students are able to learn independently. Much of the traditional teaching has been rote or repetitive learning from the limited materials available to the teachers. Teachers are an essential element for the success of the ARES Project. Whenever we do new school installations, we spend two full days working with the teachers to get them both familiar and comfortable with the technology. We also have local technicians and support staff who follow up with them throughout the school year.

Not even a pandemic can stop the ARES Project, as our Kenyan partners continued building and supporting ARES labs in schools. We were able to continue to work together online. After two years, our North American team members were finally able to return in January 2022 and re-connect in person with our Kenyan team to continue building the ARES Project. We are changing a culture. That takes consistency of time and effort.

Do you know of other experiences that were innovative, and which may have inspired you?

I have been involved in a lot of Rotary programs in almost 35 years as a Rotarian. ARES is by far the most exciting one that I have been involved with personally, and the one that has the greatest potential to change the world.

Do you know of experiences that did not work so well and could provide lessons on what to avoid?

I have referred to some of those experiences earlier. But we learned from those. One of my sayings is that problems are a learning opportunity. They are only problems if you don't learn from them.

Could you please describe what your journey has been, especially with Rotary?

I have been a member of Rotary for almost 35 years. When I was a new, young lawyer, the senior lawyer at my firm brought me along to his Rotary meetings. I was impressed by the work being done by the club members - who came from all walks of life - both in the local community and internationally.

Being a Rotarian gave me opportunities to connect with people locally and around the world, and to be involved in projects that I would never had known about. Our largest international campaign is to end polio. When I joined Rotary in 1986, polio was endemic globally and killed or crippled an estimated 350,000 people each year. Currently polio is now endemic only in Afghanistan and Pakistan and we hope to see the last case within the next few years. Polio will be only the second disease to be eradicated from human history - smallpox being the first.

Shortly after I joined, we had two speakers - a polio survivor and her father. The polio survivor was the Grade 4 teacher at my elementary school. We knew that she was teaching in a wheelchair, but did not know why. Her story - and especially her father's story of helplessly watching his daughter in an Iron Lung - sparked a change in me and connected me to Rotary's motto of Service above Self. Rotary has been a gift to me and my family. My passions have been youth programs and international service because we have the ability to change lives by enabling people with tools and knowledge.

Finally, could you share a personal anecdote about yourself, what you are passionate about?

Rotary has enriched my life and given me opportunities that I would never have had otherwise. It has connected me, my wife, and my children with a larger world and purpose. Each of my children has joined us on separate trips to Kenya. I have friends all around the world. I understand the challenges faced by so many people - at home and in other countries. I appreciate my life much more and am privileged to have the opportunity to help others.