

Braden Bateman  
County Line High School  
Branch, AR  
Rwanda, Factor 16: Education

### **Building Rwanda from the Ground Up**

A quality education is the foundation for a promising future for any person in this world, regardless of whom he/she is and where he/she lives. There are so many people who don't get the same educational opportunities we, as Americans, receive on a daily basis, yet so many students take it for granted and are completely unaware of how important a fundamental education is for the future of their lives. The people of Rwanda go through worse living conditions for their entire lives than Americans would go through on a weekend camping trip just "roughing it" in the woods, but just how tough do the Rwandans have it in Sub-Saharan Africa? A quality education is the catalyst that could lift Rwandans out of these harsh living conditions and improve their standard of living.

The lifestyle of Rwandans is very harsh. Typically, Rwandan families are not as large as one would think, averaging about 4 members per family, including a mother and father (Wages in Rwanda). However, the great Rwandan Genocide of 1994 left many single-parent families. Rwandans' diets consist of stews served with an assortment of beans and vegetables, rice, potatoes, corn, peas, and millet (Food & Daily). Fruits such as bananas, mangoes, and pineapples are eaten for desserts. Meat is a scarcity among the families in Rwanda. While Rwanda has achieved a net enrollment of 97% in primary schools (basic math, reading, history, and some science) and has a completion rate of 61.3% (Rwanda), Rwandan educational enrollment and completion drastically falls off for secondary education. With such a heavily populated country, the doctor-to-citizen ratio is just one to 12,000 (Rwanda in Need), and while over 90% of Rwandans are enrolled in Rwanda's national health insurance program, it is extremely difficult for the Rwandans to reach a doctor, not only because of the overwhelmingly large doctor to citizen ratio, but because Rwandans simply have difficulty traveling to reach a health facility.

Farming is a very important aspect of the Rwandan culture. Rwanda is one of the most densely populated countries in Sub-Saharan Africa, contributing to the small average farm size of only 1.78 acres. While the larger farms can reach sizes of a mere 2.82 acres, the smallest farms fail to even reach an acre (Rwanda State). Farm families in Rwanda grow a variety of crops for local consumption: potatoes, beans, cassava (a woody shrub known for its carbohydrates), corn, wheat, and bananas and plantains are seen as the "king" of the foods grown for local consumption. Some farmers are even lucky enough to raise their own livestock, such as goats, sheep, pigs, cattle, and chickens. While these agricultural practices are essential to the native Rwandan families, coffee, tea, and barley are the three largest cash crops of Rwanda, with coffee and tea accounting for around 80% of Rwanda's agricultural exports (Food & Daily).

Rwandans face many roadblocks to living an easier life. As previously mentioned, the size of farms in Rwanda is extremely small because of the dense population of Rwanda, causing a barrier for families to be able to grow a large supply of crops on their own farm. The water quality and quantity and soil fertility have also decreased (Maigaa) as a direct result of the dense population. Over half of the population of Rwanda is paid below the poverty line (Wages in Rwanda), and because of the low literacy rate of Rwandans, many people lack the skills to fulfill the requirements for several basic occupations. Because most families grow food for their own family, food markets are not as big a necessity, but there are always some local markets where people can trade their goods for other goods. Because of the limited farm size, a sustaining amount of crops per family is hard to achieve, thus making it difficult for many children to have proper nutrition in their developing years, which contributes to over half of Rwandan children being stunted in growth (Food & Daily).

With an education, people have the proper skills and knowledge they need to assist themselves, and others, out of poverty. The limited farmland in Rwanda means that every person must take full advantage of the land he/she is given. Without proper education in the realm of agricultural innovation, Rwandans are unaware of methods that would greatly assist them in tapping the full potential of their land. Proper education is also a necessity when it comes to earning a sufficient income in an occupational field. Studies show that in many poor countries, each additional year of schooling results in a 10% increase in personal income (Education Strategy). After primary school, only about 28% of Rwandans attend secondary schooling (Rwanda), and not all of those 28% actually graduate, which means numerous Rwandans are not reaching their knowledge potential, and thus won't be qualified for higher paying jobs to ensure them enough money to financially support more efficient agricultural practices.

Because Rwanda is one of the poorest countries in Africa (The 25 Poorest Countries), it is difficult for the government to spend a lot of money on education, which puts Rwandan children at a disadvantage. Presently, Rwanda only spends a mere \$19 dollars per student per year on their education (Education Strategy), and the teacher to student ratio is a whopping one teacher for every 62 students (Rwanda). Education beyond primary schooling is not nearly as prevalent as it should be to ensure an educated populace. With a net enrollment of 28% in secondary education, Rwandans still lack significant knowledge in the realm of agriculture, which is the most important economic factor of Rwanda.

Educational quality in Rwanda appears to be declining based on the completion and dropout rates. While the enrollment rate in primary schools has been increasing since the Rwandan Genocide, the primary education completion rate has been steadily declining since 2011 (Rwanda). Dropout rates have also increased from 10.9% to 14.3% in 2013 (Rwanda). Coupled with population increase, declining education has contributed to poor agricultural practices in sustaining soil and water quality and quantity for farm families in Rwanda. These trends show a decay in the education system within Rwanda, and it needs to be addressed immediately.

Proper education, especially within agricultural and earth sciences, is key to improving the agricultural practices of the Rwandans, which will create a domino effect in ensuring a healthy environment, an increase in the Rwandan economy, and, overall, a better lifestyle for all of Rwanda. As previously stated, Rwandans are extremely limited in farming space due to the dense population, and often, Rwandans will grow the same crops over and over again in the same spot. Because of the lack of education, Rwandans are unaware that growing crops like this drastically reduces the quality of the soil. However, with proper education, Rwandans can learn about crop rotation in order to preserve the soil quality to help plants grow better in the future. Rwanda is also known for its hilly landscape. Most Rwandans were taught how to farm on flat land by their ancestors, but since the population of Rwanda is drastically increasing, Rwandans must learn how to properly garden on the hillsides. Learning how to properly farm on hillsides will greatly increase the amount of land each farm will have available to grow crops on, thus increasing food production. Current practices have resulted in drastic soil erosion on the hill sides (Rwanda State), but if Rwandans were educated on using terraces to help reduce soil erosion when gardening, the Rwandans would be better able to grow more crops, while also preserving the soil. In order to successfully grow crops, fertile soil must be present. Another agricultural practice which Rwandans would learn about with proper education is irrigation. Rwandans must take advantage of the scarce water they have, and irrigating their farms would allow them to make full use of the water present to maintain their crops. Currently, most Rwandans rely on the "rainy" season to finally have water to water their crops with (Karanja), but educating the Rwandans and helping them implement irrigation, even if it is just small-scale irrigation, would prevent the farms from being bone-dry for part of the year. On the topic of water, adequate education would also teach the Rwandans how to properly filter or sanitize any harmful water sources and how to prevent much of the pollution, which is very prevalent in Rwanda; cleaner water equals a cleaner environment. With these educational insights on agriculture, families would be

producing more to sustain their families and also provide a greater income based on the goods they are able to sell, and because the majority of Rwandans are farmers, their increase in income would mean a boost in the overall economy for Rwanda. The healthy soil will help reduce any harmful runoff into Rwanda's water sources, thus ensuring water sources in Rwanda remain clean for Rwandans to drink and use to water their plants.

Outside factors could contribute to difficulty for Rwandans in receiving a quality education in the future. Population growth is the primary concerning factor. As the population continues to grow in the small country of Rwanda, more teachers must be present in order to teach the increasing number of children effectively. This increase in education resulting from more teachers is essential to ensure that as land becomes scarcer between the large numbers of people, agricultural practices continue to advance in order to ensure maximum use of the nation's arable land. Water scarcity is also a major factor. Over 20% of the population has no access to a safe water supply (WaterAid). If people do not have access to clean water, sickness and even death could result, making it difficult to effectively spread good agricultural practices taught in the classroom throughout the Rwandan culture. However, with implementation of proper education, these issues can be addressed and solved so that they will have much less of an impact on future generations, causing an exponential growth in a well-educated populace.

How do we address the improvement of education for the Rwandan populace? In order to address the improvement of Rwandan education, I suggest creating a Student-Teach Abroad Program. This program would give students who are in pursuit of a Master's degree in education, which requires a one year internship, the option to teach six months in Rwanda and six months in the United States instead of teaching a full year in the United States. Or, as another option, students pursuing a Bachelor's degree in education could be presented the option of studying abroad after the completion of their junior year before completing the required semester of student-teaching in the United States in order to fulfill their degree requirements. Implementing this program would allow future American general education or agriculture teachers to travel to Rwanda and teach Rwandan students as additional primary teachers, secondary teachers, or, simply, agricultural educators. Doing so would reduce the teacher-to-student ratio and allow for more efficient teaching of children by easing the burden of teachers who would normally have large classes of students. By creating a network of pre-service American student-teachers, teachers would be able to work together to educate the Rwandan students under the direction and guidance of the current Rwandan teachers and their college professors in the United States while also growing in their teaching skills and international experiences. American student-teachers could also provide monthly night classes for adults in order to teach them proper scientific principles and agricultural practices in order to more quickly impact Rwandan agriculture.

However, just verbally educating the Rwandans would most likely not be good enough. While five or six adults might believe the teacher's words and actually put the teacher's advice into action, most people in general are more likely to believe someone's advice if they see it in action, and because of this generalization, I suggest that the teachers are provided, or look to acquire, a small plot of land in which they can choose how to benefit the community. Primary and secondary general education teachers can create a community garden in which the students would work to maintain it, and the community will receive the produce. Student-teachers who are planning on becoming agriculture teachers can prove to the Rwandans just how successful their new advice in agricultural practices really is by planting specific crops following the new ways and demonstrating the innovative practices where the Rwandans can actually see these in action.

The Rwanda Family Health Project was a local project designed to expand health services within Rwanda in order to improve the overall healthcare of the country (Delivering Improved Health). While this project was decently successful, it could be improved tremendously with the implementation of the Student-Teach Abroad Program. Teachers that volunteer to teach in Rwanda could also teach some adult health

and human services classes which would in turn benefit the Family Health Project by providing Rwandans with information on proper sanitation and grooming practices so that they may live a healthier lifestyle. Quality healthcare is essential in a society where malnutrition and stunted growth in children is a prevalent problem (Poverty & Healthcare), and so, combining the adult health and human services classes with the education of new agricultural practices would result in a tremendous drop in malnutrition rates, thus drastically improving the overall health of Rwandans.

In order for the Student-Teach Abroad Program to be successful in Rwanda, certain people must assist in the effective implementation of it, whether it is with finances, resources, or just with simple cooperation with others. Before the student-teachers go to Rwanda for their teaching abroad experience, their current university, the University of Arkansas for example, could assist in collecting any old grade-level appropriate textbooks from within their communities for the student-teachers to ship to Rwanda to help teach the Rwandans. After their teaching time is completed, they can leave the books with the Rwandans so that they can use them in the future if the need arises. Financially speaking, the University of Arkansas' study abroad program could partner with the World Bank, considering they have had past projects in Rwanda, or possibly Heifer International because their world headquarters are based in Little Rock, AR. Both groups have had past experience with Rwanda, but have had virtually no part in assisting with education directly. Because of these past connections, both companies might be more liable to assist in the Student-Teach Abroad Program. The final key for the successful implementation of the program would be cooperation from the Rwandan government and citizens by actually taking the advice and education from the student-teachers and applying it to their lives in order to improve their lives, not only in the agricultural aspect, but also economically and environmentally. If this project works on the small scale with the first partnering university and Rwanda, it could also be expanded to other universities and countries in similar situations as Rwanda in order to improve upon their struggling educational and agricultural systems. In conclusion, the Student-Teach Abroad program could be successfully implemented with three major components: the University of Arkansas' study abroad program along with the teaching resources the university can provide for the student-teacher once they have arrived in Rwanda, funding partnerships with companies such as World Bank and/or Heifer International, and the cooperation of the Rwandan government by providing the Student-Teach Abroad program with the locations of the most in-need communities.

The extremely dense population of Rwanda has caused Rwandans' lives to be very difficult, and their population is continuing to grow to this day, while the size of their country is still unchanging. Because of this serious problem, immediate action must be taken to help improve the lives of the Rwandans and also ensure a healthy lifestyle for future Rwandans by teaching them how to take advantage of the limited land they have to farm on. With the implementation of my Student-Teach Abroad Program, and with cooperation from the presently mentioned groups, Rwandans will receive an abundance of knowledge through secondary education and exposure to advancements in agricultural practices to help them grow their economy and ensure the safety of their environment for the future, making certain that Rwandans will have enough food to feed their growing population. Being one of the poorest countries in Sub-Saharan Africa, Rwanda is in dire need of assistance. Are we going to just idly stand by as we watch millions of kids die and suffer from starvation and lack of proper nutrition? Or are we going to be the nation that is known for assisting Rwanda, one of the countries most in-need in the world? Rwanda desperately needs our help, and we must not waste any more time by simply standing by and doing nothing. Action must be taken.

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