Kate Bishop Indianola High School Indianola, Iowa Mali Factor 15

Education: The key to combating hunger, poverty and major issues in Mali.

Mali suffers from foreign, domestic and natural barriers that prevent many citizens from acquiring the necessities of life. Mali is a land-locked country located in the western Sub-Saharan portion of Africa. The northern lands of Mali are primarily desert, thus the country depends on the land and products of the Niger River that runs through the south and east ("Mali – Agriculture"). Mali also suffers from government unrest. Mali gained its independence from France in 1960 and transitioned into a dictatorship for more than 30 years. In 1992, a shift of power left Mali with a democratic government that served as a model for other African nations. However, in March of 2012 the Tuareg, a nomadic group known for their anti-government ideals, staged a coup in the northern portion of Mali. The Tuareg were quickly replaced by a strong Islamic group that presently maintains power in the northern deserts. An interim prime minister and president currently preside over the government awaiting French assistance and training for their own army before the north can be retaken. The coup displaced many northern Malians and caused considerable upheaval in both the political and private lives of citizens of Mali today (Allen).

The typical family in Mali consists of five to six children along with two parents. The family lives in a small dwelling constructed with sun-dried bricks and straw roofs. These dwellings are often shared by a nuclear family and many extended family members. Expenditures on health make up approximately 7.5% of the total GDP. Only 56% of Malian citizens have access to improved drinking water and 36% have access to improved sanitation facilities. In 2009 approximately 76,000 Malians were living with HIV. IN terms of education, 36.1% of males are literate and only 19.8% of females. Moreover, 66.5% of primary school age boys are enrolled in primary school and only 51.7% of girls ("Statistics"). The statistics continue to drop through secondary and tertiary schooling. The repetition rate is currently 18.6%, and grade repetition is more often seen in the education of girls ("Girls education: Toward a Better Future for All"). These statistics demonstrate both the low enrollment and poor quality within Mali's schools.

Four fifths of Malians survive through subsistence farming. Their chief crops include millet, maize, and rice ("Mali"). One third of Malians harvest and sell cotton, as well, to provide for their families. These farmers face difficulties in selling their crops. In American and European countries cotton producers are able to harvest cotton at a loss. Federal government subsidies cover the difference, making cotton a profitable crop in wealthy countries and at the same time lowering cotton prices 10% globally. The government in Mali provides some small loans but is unable to subsidize any commercial crop production, leaving farmers subject to lower prices and subsequently little profit. Additionally, the central Africa region is prone to inconsistent weather patterns. The summers tend to consist of torrential rains that can cause erosion and loss of nutrients in the soil, plaguing farmers' crops. In the winter, Mali can experience serious droughts. The summer rains often do not offset the draughts, causing substantial agricultural loss for Malian farmers (Rabinowitz).

These issues not only cause farmers to struggle, but impact the Malian population and economy. The aforementioned declining cotton prices prevent Malians from earning a living wage. The average citizen must survive off of two dollars a day. Consequently, 64% of Malians live below the poverty line. Malians also suffer from lack of nutrition. With an agricultural system that is centered on cotton, maize, and millet, many citizens are unable to receive the necessary micronutrients. Two thirds of Malian's meals consist of cereal, or a mixture of millet and maize. An unbalanced diet such as this creates a population that is more susceptible to deficiencies in micronutrients such as iron, iodide and multiple vitamins. The lack of fruits in vegetables attributes to these deficiencies tremendously ("Nutrition Country Profiles").

Education can provide direct economic benefits for Malians. Each year of education a child receives translates into a 10% increase in his future wages. For girls, each year of schooling allows them to earn up to 20% more in wages (Ki-Moon). Education can impact many other areas of life, as well. Teaching agricultural practices, sanitation, and nutrition skills to citizens can also have a major impact on quality of life in Mali.

The educational system in Mali is broken. The issues facing the system are three-fold. The first facet concerns the low enrollment rates in primary schools. Only 62.9% of children are enrolled in primary school, leaving 849,651 children between the ages of 6 and 12 receiving no education whatsoever. Furthermore, only 32.6% of students are enrolled in secondary education. The large drop off between the enrollments is in part explained by the high dropout rates. One in four students that attends primary school drops out before completion ("Country Profiles").

The poor secondary school numbers can also be explained by the second facet of the problem, quality. The children that do attend school are unable to reap all of the benefits education has to offer due to the poor quality of education they are receiving. In the average primary school classroom, there is one teacher for nearly every 50 children ("Country Profiles"). This ratio is a barrier to quality education itself, let alone when the quality of the teacher is taken into account. Many teachers have little to no formal training. They also lack textbooks and materials that make learning possible ("Call to end neglect of emergency education in Mali").

Finally, the intense conflict resulting from the coup in 2012 has devastated the education system in Mali. The fighting caused 115 schools to shut down in the north, displacing 700,000 students. Currently, more than 200,000 of these students still remain out of school ("Conflict and crisis in Mali disrupt schooling for some 700,000 children"). All schools in the territory of Kidal remain closed while only 5% of schools in Timbuktu have resumed operation. Many families fled the north as a result of the fighting and now reside in refugee camps in the south. The southern schools are unable to absorb the influx of students as they were strained for materials and instructors prior to the conflict. While most teachers fled as well, some continued instruction in the refugee camps. A former teacher from Timbuktu is now educating more than 100 of her pupils in a tent in a camp in Mauritania. The children have no textbooks or materials and must sit on the ground because there are no desks. The psychological effects of the conflict on Malian students have also impacted their education. "Being at school, I heard gunshots. The head teacher told us to go home," said Amadou, a 12 year old boy displaced by the conflict. "Even being at home, I heard gunshots. For about two weeks, I did not go to school. I forgot a lot of things, because I was upset. The shots that I heard caused me much fear." In order to help children like Amadou, Mali is in need of money, however, as a result of the undemocratic practices, the United States and other nations have ended all funding to the Malian government ("Call to end neglect of emergency education in Mali"). Some of this money was channeled to education, however none was apportioned for emergency situations such as Mali is facing today. The combination of all these factors---low enrollment, poor quality, and conflict---contributes to Mali's dire educational situation.

Girls have even more hurdles between them and an education. The primary challenge is the expenses. While public education is free in Mali, there are hidden expenses that the parents must shoulder such as uniforms and materials. Girls often require special transportation, as well, to protect their decency. This custom results from ongoing violence against women and is a burden the parents of girls must bear. The longer a girl attends school, the more years she is unable to work and the higher her dowry will become when she marries. These monetary obligations can cause parents to prevent their daughters from attending school. A hostile school environment can also be a barrier. Girls can face discrimination and degrading attitudes within the school walls. Furthermore, it is common for boys and girls to be expected to share the same restroom facilities, which discourages adolescent girls from attendance. Finally, the position of

women and girls in society can prevent them from receiving the same educational opportunities. Girls are seen as weak and yet often they are expected to run the household. They have many domestic responsibilities and during times of conflict, can be expected to be full-time caregivers to injured or sick family members. These duties are sometimes prioritized over education, putting girls at a disadvantage. Girls also have little control over their lives, another result of their weak position. It is common for a girl to be forced into a marriage before age 18. They also have little control over whether or when they bear children. As soon as a woman is with child, she almost always ends her educational career immediately. All of these factors contribute to the large number of girls out of school. More than 474,323 girls primary school age are not enrolled. For those who are enrolled, the likelihood that they will drop out before completion is much higher than for boys ("Girls Education: Toward a Better Future for All").

Geography also plays a strong role in the amount and quality of education for a child in Mali. Only 37% of children from rural areas of Mali attend primary school while nearly twice as many from urban areas are enrolled. Furthermore, trained teachers are sent to urban areas, leaving instructors with little experience teaching rural students. The gap in quality is most starkly seen in that only 14% of rural students attend secondary school. The gender and geographical disparities in Mali can be nearly impossible for some children to overcome, leaving them with little hope to overcome poverty.

Education in Mali has been on an upward trend. Between 1999 and 2011, primary enrollment rates slowly climbed from 42% to 63%. Completion rates have experienced similar growth ("Country Profiles"). UNICEF has also instituted "child-friendly/girl-friendly" practices to combat discrimination against girls in the educational system (Lynch). The political unrest and conflict has caused considerable disruption, however. With many children out of school or learning in make-shift schools, the educational system has taken a tremendous hit. Until statistics for 2012 are released it will remain unclear where Mali's educational system is today in relation to the past few years. It is clear, however, that until the conflict in the north is resolved, receiving an education will remain difficult for many of Mali's children.

Education is unique in that its benefits span across many areas of life. It can primarily impact food related issues in two ways. First, through education, citizens of Mali can learn how to combat malnutrition. One major strategy is teaching mothers to breastfeed their children for six months. Many mothers breastfeed for only a few months then incorporate water and gravy. The simple knowledge about breastfeeding can prevent malnutrition. Furthermore, by teaching citizens about the importance of a diverse diet, micronutrient deficiencies can be diminished ("Nutrition Country Profiles"). Organizations have taken it upon themselves to inform Malian consumers about the importance of fruits and vegetables in their daily diet. These groups have also worked to inform the producers of the nutritional value of their products so they in turn can pass the information to prospective customers. Second, education can directly increase future wages as mentioned previously. By earning a higher wage, Malians are able to purchase more food or food of a higher quality.

Education also has many economic impacts. Higher wages give each citizen more purchasing power and in turn can stimulate the economy. It is impossible, however, to experience rapid, continuous economic growth without 40% of the adult population literate. In fact, if every child had basic reading skills, 12% of the population would be lifted above the poverty line. Education is crucial in eliminating poverty and establishing a successful economy.

Education can also be utilized to improve other issues faced by developing countries. Through teaching farmers sustainable agricultural practices, the land can be better utilized and preserved for future generations. Also, crop variation can not only protect the land but also enable citizens to gain the dietary diversity necessary. The majority of farmers in developing nations today are women. The education of these women has allowed them to be able to cut the prevalence of malnutrition by 40% in the past 40 years ("Education and the Developing World").

Education surrounding sanitary practices is crucial as well. Informing citizens about proper hygiene can prevent disease. "We have learned to wash our hands with soap and water before eating and after using the latrine," says Sarata Traoré, a mother of five in Dougouba. "These are good practices the family now follows at home." Simple practices such as these can prevent the spread and contraction of sickness. The health benefits of being educated go even further. Young people that have been educated are less than half as likely to contract HIV as those who have received no form of schooling (Lynch).

Finally, education can play a key role in the lives of women in Mali. Through education, women can gain a better understanding of their rights. This understanding can help women stand up to injustice and assert their rights. Also, women who have attended school are less likely to have early pregnancies and have less difficulty avoiding violence. Furthermore, women who have completed primary school commonly seek prenatal care, assistance during childbirth, and postnatal care. These women are also twice as likely to immunize their children as a woman who has received little education. These actions act to diminish fatalities of both mothers and children during the birthing process and following years ("Education and the Developing World").

Obviously, many of these topics are not studied in primary school. However, increasing the number of children that attend school and gain quality instruction can foster a love of learning and an appreciation for the benefits of knowledge. By understanding the opportunities of an education, children are given the tools to seek out the information that applies to them---how to rotate crops, irrigate a field, start a business---in the future when they enter the workforce.

Any major issue that becomes prevalent in a society can negatively impact education. The issue Mali currently faces is a rapidly growing population. Mali's population is growing by 2.5% annually and has tripled in the past fifty years---and is expected to triple again in the next fifty years. These dramatic increases will place even more pressure on already limited resources. The northern portion of Mali is desert and therefore farming is difficult and primarily done in the south. With limited space and production capabilities combined with undeveloped infrastructure, Mali is unable to sustain such a large population. This is relevant to education in two ways. First, as soon as parents need their children to work due to increases in prices of food and resources, they will pull the children out of school, ending their education and limiting their future opportunities. Secondly, with a growing population there will need to be more schools and infrastructure to support them. Even more importantly, there will need to be even more trained teachers to keep up with the demand. These issues, while not as clear today, very probably will be the tough problems citizens in Mali will face in the years to come (Howard).

Each Millennium Development Goal (MDG) can be improved by education and has been outlined thus far. The primary MDG that applies to education is "Achieve Universal Primary Education for All." Unfortunately, this goal most likely cannot be achieved by 2015 in Mali. This is due to the number of children currently out of school that would have need to be enrolled in 2009, the persisting gender disparities, and the lack of existing infrastructure and trained teachers to support any large increases in enrollment. That being said, large steps have been taken towards improving all of these factors and large steps will continue to be taken until the MDG is achieved in Mali and every developing country. In terms of continuing to take these strides there are a few effective methods in existence. The first dire need of Mali's education is trained teachers. The disproportional student to teacher ratios put a strain on the entire system. Presently, Mali is also in need of emergency funding. With many schools shut down, looted and pillaged, Mali could desperately use money to rebuild the educational system in the north and alleviate the pressure placed on southern schools (Gladstone).

UNICEF's "three-in-one" program in Mali has seen success in many parts of the country. Beginning in the village of Dougouba, the program integrates education into the lives of Malians in three ways. First, it

offers an Early Childhood Development (ECD) center for pre-school children. The ECD program prepares children with the skills necessary in primary school. "Those who started out in the ECD centre are more sociable, active and alert," said a primary school teacher in Mali. "They have already developed good school habits, so it is easy for them to adapt to school. This means they get better results and are more likely to stay in school." The ECD program is popular for other reasons as well. Kadidia Djiré, a matron at an ECD center in Dougouba, explains why the program is so popular among mothers:

In this village, people are farmers. Previously, when they went to work in the fields, they had no alternative but to leave their kids at home alone, with siblings or with the old people in the village. But this was risky. The presence of the ECD centre means mothers now have a safe and secure place to leave their children.

The second component to "three-in-one" schools is primary school. These schools incorporate UNICEF's "child-friendly/girl-friendly" program as well. These primary schools are designed to be able to absorb children that have missed months or years of school, and catch them up accordingly. The final facet of the "three-in-one" school is Non-formal Education (NFE). This program allows adolescents that received little to no education the ability to gain practical skills that can be used in the work force. Boys and girls between 9 and 18 can gain skills such as sewing, carpentry or farming. They can in turn use these abilities to gain better jobs and earn higher wages.

The "three-in-one" program has seen great success in Dougouba and has been expanded to more villages. The program's unique ability to provide options for all age ranges makes it valuable in a country like Mali where many students are behind in their schooling. By increasing the breadth of the program, Mali could better serve students of all ages as well as provide job skills for those entering the work force. "Communities are asking for them," said Ministry of Education Regional Inspector, Zakaré Kamaté. "They don't like the idea that so many of their older children are just hanging around … and they want their young children to attend an ECD centre," (Lynch).

On a more national scale, the implementation of the United Nations (UN) initiative, Education First, could improve education for thousands of Malian students. The initiative, created by UN Secretary-General Ban Ki-Moon, is composed of three parts. The first feature focuses on getting every child in school---an achievement that would reach the education-related MGD. The second feature calls for higher standards for the quality of education received. The final feature aims to achieve global citizenship, which centers on teaching values, 21st century skills and ideas, as well as leadership skills. Mr. Ban is hoping to transform the way children are educated to reflect the current job market---technology and practical skills--and help them forge more just, peaceful and tolerant societies," (Ki-Moon). This aspect is especially relevant in Mali where conflict is extremely prevalent.

Finally, the work of Mary's Meals could be very beneficial in Mali. Mary's Meals is a non-profit organization that provides children with one nutritious meal a day at their school. This program targets enrollment and hunger issues by encouraging children to attend school where they receive vitamin-rich porridge. Mary's Meals workers come into the school and build a kitchen facility where local women are able to prepare the food ("Mary's Meals").

Where a child is born should not dictate whether his or her basic needs are met. Therefore, issues of hunger and education are the shared responsibility of every nation. As education can improve many global issues that affect the basic needs of children and adults, it should be a priority among developed countries. The United Nation's global Education First initiative is a step in the right direction. Though ideas are important, they will do little without implementation. Unfortunately, implementing such broad and sweeping changes requires significant funding. While this can be a major obstacle in achieving solutions to many global issues, it is important to remember the overreaching affects of education and

look to the long term effects. Education can not only improve lives but also become a profitable investment. For every US dollar invested there is a 10-15 US dollar return. This opens the door to long-term no-interest loans as an alternate option to direct funding as well (Ki-Moon).

Education is also unique in that by educating an individual he or she is immediately given the tools to improve his or her situation. That individual is also easily able to pass on that information to neighbors and open their eyes. Training teachers and individuals who can in turn teach future teachers is one way to increase the quality of instruction and employ more Malians. It takes one wave of trained teachers to establish a network for all teachers to receive the necessary training.

The dire situation of Mali's education system cannot be ignored. Every year a child is not in school, he or she is losing future wages and decreasing his or her chances of rising above poverty. Education is key in eliminating cyclic poverty in Mali, and thus imperative in combating widespread hunger.

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