1 World Connected
Data-driven Research to Bring Billions Online

AFRICA ICT RIGHT

PROVIDING ICT ACCESS AND TRAINING WITH A FOCUS ON EDUCATION, GENDER, AND HEALTH IN GHANA

Students supported by Africa ICT Right. Photo credit: Africa ICT Right

EXECUTIVE SUMMARY

Africa ICT Right (AIR) is a volunteer-run information and communications technology (ICT)-oriented nongovernmental organization (NGO) established in 2007. The organization seeks to use ICT tools to address education, gender, youth empowerment, and health in Ghana. They partner with donors, governmental and private institutions, NGOs, and local communities to address the digital divide. They run integrated programs that provide technological solutions and support to educational and health facilities in underserved areas. Under the education vertical, the organization runs three programs: ITeach ICT equips teachers with skills to integrate ICTs in their lessons, Computer4Change is a laptop-donation program, and Connecting the Unconnected consists of building replicable ICT-equipped community centers. Mobile4Life is a health services application, under their health program, and Girls In Tech educates girls about basic coding skills or ICTs.

Keywords: ICT access, ICT training, education, gender, health, Ghana

CONTEXT

Telecommunications is the main economic sector of Ghana, but costs remain a challenge for improving Internet connectivity. According to a *2012 study by Research ICT Africa*, 60 percent of the respondents said the high cost of access prevented them from using the Internet. Broadband services are expensive for most Ghanaians in general, which affects usage rates, but according to *Abel Mavura from ActionAid Ghana*, women from developing countries such as Ghana are further discriminated from accessing science, technology, engineering, and math (STEM) fields due to the lack of infrastructure and training, socio-economic constraints, and lack of confidence.

The government is embarking on a digital inclusion agenda to benefit all citizens. More specifically, the government is planning to provide affordable broadband services for all Ghanaians by 2020. The National Communication Authority has embraced television white space (TVWS) technology to extend Internet services to rural areas, hoping to improve ICT teaching and learning in schools. The Accra Digital Center, sponsored by the Ministry of Communications, was also created to promote entrepreneurship and growth in Ghana.

Civil society and the private sector have also been active, especially targeting the gender gap in ICT use and specialization. The Young Urban Women Project, a partnership between Action Aid Ghana, the Northern Sector of Action on Awareness Center (NORSAAC), and The Ark Foundation Ghana, organized interventions like WomenOnline4Dev and Social Media for Change to train girls and women with ICT and social media capacity.

Ghana			
Population (UN, 2015)	26,984,328	**Fixed broadband subscriptions (%) (ITU, 2016)**	0.31
Population density (people per sq. km) (UN, 2015)	113.13	**Mobile cellular subscriptions (%) (ITU, 2016)**	139.13
Median household income (Gallup, 2006-2012)	US$ 2,050	**Individuals using the Internet (%) (ITU, 2016)**	34.7
Education (mean years of schooling) (UNDP, 2013)	Male: 8.1 Female: 5.9	**Individuals using the Internet by gender (%) (ITU, 2016)**	N/A

PROJECT DESCRIPTION

Africa ICT Right has three projects that seek to improve ICT access in underserved areas: Connecting the Unconnected, Mobile4Life, and Girls In Tech.

Connecting the unconnected – Started in 2007, this project locates community centers in rural areas and provides them with computers. Africa ICT Right set up public ICT centers for the community as digital information hubs. This enables skill sharing among community members who can help each other build and develop their digital skills. Services are not free. The

organization charges a small fee to cover the basic costs of operating the centers. The cost to users is between 1 cedi ($0.22) to 50 cedis ($10.99) depending on the services used. They charge 50 cedis for computer skills training. They currently operate five centers in communities in different regions of Ghana: three in the northern region, one in the western region, and one in the central region. A community member that has been hired and trained manages the centers. Moreover, AIR selects the location of centers based on the requests received from the communities themselves.

Mobile4Life – The Mobile4Life project is designed to address the fact that there is typically no communication between patient and health center unless the patient comes to visit the health center in person. The project was started in 2015 using an existing mobile application called Medimobile as its platform. The application connects users to health services, including family planning, immunization, breastfeeding, nutrition, hygiene, and more. They avoid requiring Internet data by using a Short Message Service (SMS) bundle. Although they aim to send messages weekly, due to the lack of funding, they currently send messages on a monthly basis. They are also trying to develop a hotline service. Midwives, pregnant women, and community workers get training on how to use the app. Community health workers can message the health facility in advance to prepare for a patient's visit and complications. The application also provides information to pregnant women on nutrition, breast feeding, prenatal care and delivery. The training lasts one week ,for two to three hours per day. The midwives are women whose ages range from the late 20s to the late 50s.

Girls In Tech – This initiative is designed to equip girls with the skills and enthusiasm necessary to pursue a career in technology. The program serves schools in two regions: 12 schools in the western region and 25 schools in the northern region. Roughly 50 girls in each school are enrolled, and more than 1000 girls have participated in this program. The program targets schools with systematically low marks in STEM education. The program lasts one hour per week for six months, and the services are free to students. They also train ICT teachers at the schools, using a train-the-trainer model, and the teachers receive a stipend. They also award the best teachers at the end of the program, based on student performance.

Project details			
Technology	Mobile-based training	**Training**	Basic ICT training for students, teachers; app training for midwives
Year program started	2007	**Cost to users**	US$ 0-10.99
Geography	Five regions in central, northern, and western Ghana	**Total cost of program**	Operational costs: US$ 36,000 for all programs
User profile	Rural communities; midwives and patients; female students	**Associated organizations**	Access 4 All Initiative, Close The Gap, Computer Reach, Google,

			United Way Ghana, Vodafone, Wango, WeTech

PROGRESS AND RESULTS

Progress has been varied for the different initiatives and is correlated to the operating cost of each project. Funding has been limited; costly initiatives are harder to sustain. Currently, five communities are served by the ICT centers of the Connecting the Unconnected project. Mobile4Life has only just completed the pilot stage in 2017, so impact cannot be adequately assessed yet. It currently serves two health facilities and is used by more than 1,000 women. The pilot project was operated at no cost to the facilities served in order to provide proof of concept, so the project has been operating at a deficit, which has made its full rollout difficult. Girls In Tech serves 37 schools across two regions, and has educated more than 1,000 girls in ICT skills so far.

CHALLENGES

Social norms – The major challenge of Mobile4Health is the acceptance of this mobile application at the health center. Adoption by health centers has proven to be a huge challenge. People are resistant to change the services they provide, and employees are resistant to learning new technologies.

Lack of perceived benefit by users – For the Mobile4Life program, it was hard to scale the program in health centers due to health care workers not seeing the potential benefits of this new technology and paying for it. This led the organization to cancel their previous plan to charge customers in the pilot phase. The organization has devised the strategy of charging no up-front cost for the facility center, and only charging retroactively after the patient sees the benefit.

Lack of funding – The projects cannot all be realized in their intended form due to lack of funding. For instance, programs that were planned to operate weekly have to lapse into a monthly cycle when resources are not available. This reduces the utility and trust in the service when it does not deliver on its professed plan of operations. Most funding sources do not fund direct technological interventions, but fund broader human rights, gender, education work.

AIR'S SUGGESTIONS FOR FUTURE PROJECTS

Stable funding is required to maintain programmatic interventions in the long term – Demand is huge, but the resources are limited. Adoption can be a hurdle, but projects greatly benefit from stable funding in order to facilitate user acclimation to the services and tools.

SOURCES

Kwaku Ganyoame, D. (2017, October 10). Personal interview.
Project website: www.africaictright.org