

GIRLS ♥ TECH

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TECHKOBWA

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The TechKobwa Project¹ is inspired by Rwanda's resilient and ever growing information and communications technology (ICT) sectors. It aims to empower Rwandan women to play a key role in their country's Vision 2020²— a plan to transform an economy dominated by subsistence farming into one driven by information and communications technology—through a series of residential camps for young women and their ICT teachers from secondary school throughout Rwanda.

The camps' goals for young women include: providing a fun, innovative, ICT-rich environment to increase their knowledge, understanding, and experience with computing, engineering, and other STEM concepts; positively affect their attitudes about ICT as a career; increase their self-esteem and leadership capacities; and build community to develop teamwork skills, improve communication, and find mentors.

The camps' goals for teachers include: providing a "training of trainers" model to learn ICT skills, engineering concepts, and innovative methods and materials for teaching at camp; gain experience with the model; and inspire them to take materials,

methods, knowledge, skills, and abilities back to their home schools to disseminate for continued long-term impact.

Lessons include basic computer skills, computer programming, photography, computer maintenance and security, and electronics; as well as leadership development, problem-solving skills, and career mentoring.

Quick Facts:

- Launched in 2013 by Peace Corps Volunteers, a weeklong TechKobwa camp has run for three consecutive summers.
- Over 150 females ages 12 – 20 have attended, primarily from secondary schools in rural areas of the country.
- 30 ICT teachers from the same schools as the students have undergone training of trainers at a Techkobwa camp.
- Sponsors included US Peace Corps, Ministry of Youth and ICT, IBM, and Michigan State University.
- Financial support and expertise was also provided by Creation Hill, ELERwanda, Girls in ICT, ACM-W, and IEEE CS.

Outcomes of TechKobwa 2015:

- Student mastery of subjects was low before the camp (22%), but high after the camp (83%).
- Student learning outcomes improved significantly ($p < .05$) in 29 of 36 subjects taught
- Student confidence in technical ability also increased significantly

¹ 'Kobwa', pronounced 'kobga', is the Kinyarwanda word for girl. TechKobwa website: <http://www.egr.msu.edu/techkobwa>

² <https://timedotcom.files.wordpress.com/2015/04/d402331a.pdf>

Outcomes of TechKobwa 2015 (continued):

- Teachers came to camp with mastery in about half of the subjects taught, but left with mastery in more than 80%
- 100% of teachers said that their ICT skills increased during camp.
- 90% of teachers left camp with the knowledge and confidence to to teach ICT in clubs and courses
- 99% of all camp participants, including students, teachers & facilitators, reported that their teamwork skills improved

Top Five Recommendations for Improving Camp by Participants of TechKowa 2015:

- Increase the length of camp from 1 week to 2 or up to 4 weeks.
- Include more students from more schools.
- Provide more computer lab time.
- Offer more camps at more locations in Rwanda.
- Provide more training of the trainers.



Looking to the future: We seek funding to grow, evaluate, and disseminate the TechKobwa model for building capacity in under developed countries. This project is helping Rwanda realize its vision to move from an agrarian society to a leader in ICT and entrepreneurship. By empowering Rwandan women, it is ensuring long-term stability of the society. Goals for the next five years include longitudinal assessment of long-term impact; and packaging and testing the model for replication in other developing nations.

For more information and to contribute, please visit <http://www.egr.msu.edu/techkobwa>.