

Mombasa Girls in STEM Solve IT

The results of the K.C.S.E(O-Level) exams have shown over the years that boys outperform girls in the sciences and math subjects, fewer ladies also take up science,technology,engineering and mathematics courses at the tertiary level. We believe this is pegged on the attitude and perception of girls towards these subjects.The project aims to increase the interest of girls in science based subjects by having women professionals from Mombasa train high school girls on a STEM based curriculum.

CATEGORY

[Empowering Women and Girls](#)

LOCATION

[Kenya](#)

WHAT IS THE CHALLENGE OR NEED YOUR PROJECT WILL ADDRESS AND WHAT INNOVATIVE METHODS WILL YOU EMPLOY?

Describe the specific need or challenge that your team will address with this project

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Briefly describe the specific solution or approach to address the need or challenge and

MEET THE TEAM

Project owner
[Umikaltuma Mohamed Kenya TechWomen](#)

Project members
Manage members
[Sandra Kambo Kenya TechWomen](#)
[\[remove from project\]](#)

[Adah Waseka Kenya TechWomen](#)
[\[remove from project\]](#)

[Serah Kahiu Kenya TechWomen](#)
[\[remove from project\]](#)

[Mbarka Selmi Tunisia TechWomen](#)
[\[remove from project\]](#)

[Goody Odhiambo Kenya International Visitor Leadership Program \(IVLP\)](#)

explain why it is innovative

It is the first time in Mombasa that anyone is using local professionals to run such an initiative. The trend so far has been to bring professionals to schools to give talks to students and there has been no significant improvement as these methods do not go through a process of evaluation and awards where winning projects can even be considered for implementation by the local government and community. Our approach will strengthen the capacity of existing female professionals, have them train the girls and take them through a curriculum & help them design a project to be presented at a fair.

How will the project impact your community? What changes (in people, institutions, attitudes, practices) do you think you will see?

During the project, the students will be tasked with designing a solution to a community problem in Mombasa. The aim is to invite local government leaders to the STEM fair and have them judge the feasibility of the solutions designed by the girls and consider implementing the winning solution. After hosting the first girls STEM fair in Mombasa, we are confident that the attitude of the participating girls towards STEM would be more positive. Moreover, the public attending the fair will also become more aware of the impact that girls can make through STEM. The project will also demystify science subjects among the girls by introducing them to female professionals in STEM fields the aim being to increase the number of girls taking science subjects in high school and continue to STEM based courses in college or university. Furthermore, the participating high schools will be encouraged through the fair to continue promoting science subjects and STEM based courses to girls.

WHO WILL BE INVOLVED?

Beneficiaries: who are your target groups (or communities) and how many people will directly benefit from your project?

1. Primary beneficiaries -
 - 150 high schools girls between the ages of 14 to 18 years from public and private schools in Mombasa, Kenya.
 - 25-30 women professionals from Science, Technology, Engineering and Mathematics fields who will be the trainers of trainers and conduct the training for the girls.

[African Women's Entrepreneurship Program \(AWEP\)](#)
[\[remove from project\]](#)

[Annie Njenga Kenya TechWomen](#)
[\[remove from project\]](#)

[Ikram Islam Sr. Pakistan Salzburg Seminar](#)
[\[remove from project\]](#)

[Nasir Ngala Kenya International Leaders in Education Program \(ILEP\)](#)
[\[remove from project\]](#)

[Sylvia Mukasa Kenya TechWomen](#)
[\[remove from project\]](#)

[Joanne Mwangi Kenya Cultural Exchanges \(Other\)](#)
[\[remove from project\]](#)

2. Secondary beneficiaries -

- Participating high schools in Mombasa who will benefit from more girls taking up science based subjects in schools and performing better in them.
- Families of the girls whose perception of girls in science will change.
- The wider community of Mombasa will benefit from a better overall performance of girls. Furthermore, the projects the girls will work on will be tailored to solve a community problem.

Local partners

1. M-Power Ladies-TechWomen Kenya 2014 partnered with them to host a STEM workshop on January 10th 2015. Their volunteers assisted with facilitation of the STEM workshop training and logistics in Mombasa. They have agreed to partner with us again for this project.
2. M-Power - a community based organization in Mombasa from which M-Power Ladies grew from. They will provide volunteers for project implementation.
3. Swahili Box - the planned technology open space in Mombasa were sole sponsors of the STEM workshop held in Mombasa.
4. Local Government - dissemination of information and judging of the projects and in kind support to the project.
5. High schools in Mombasa - we have maintained contact with the three high schools that took part in the workshop, two of which M-Power Ladies and members of the TechWomen Kenya alum and M-Power Ladies are mentoring for Technovation Challenge this year in Mombasa.
6. Professional Associations in Mombasa - we will reach out to the associations to get female professionals for the training of trainers phase.

Alumni team

1. Umikaltuma Ibrahim – Coordinator to be in charge of project coordination and ensure project is implemented within defined timelines. She will also be in charge of communication within team members
2. Sandra Kambo – Finance and Monitoring and Evaluation roles. She will manage project resources, oversee reimbursements and ensure training is progressing well, analyze if timelines are being met by generating reports to the team via weekly emails and monitoring surveys are done.

3. Adah Waseka - Logistics Manager to be in charge of all ground activities and trainings, sourcing for venues, security.
4. Annie Njenga—She will take charge of creating and maintaining partnerships with local businesses, the local government, CBOs/NGOs, professional associations during the implementation.
5. Sylvia Mukasa—Communications; she will oversee communications about the project to the schools, local government and the public.
6. Serah Kahiu - Program Officer;project implementation.

Proposed Project Dates: August 01, 2015 - August 01, 2016

HOW AND WHEN WILL YOU IMPLEMENT YOUR PROJECT?

Implementing Plan and Timeline

PHASE ONE - August-December 2015

- Finalizing the project implementation team and division of responsibilities.
- Development of Monitoring and Evaluation tools.
- Identification of participating high schools and female professionals in STEM. Use existing science clubs in high schools or work with the school to create a new STEM club.
- Developing a detailed training module.
- Identifying and approaching experts in different STEM fields who will teach specialized areas of the curriculum.
- Training of trainers, the female professionals will be taken through the same curriculum that they will teach to the students.

PHASE TWO - January - June 2016

- Training of the students by role models/professionals. The students will be divided into groups of 5 and be given lessons on relevance of STEM, design thinking, innovation.
- Imparting of soft skills such as presentation, communication and group work skills
- The teams will also be working on a STEM based project during the curriculum that aims to solve a community problem in Mombasa. Students will be tasked with building prototypes for their solution.

PHASE THREE - July 2016

- Host the first Mombasa Girls in STEM fair where the students display and present their projects and prototypes to the public.
- Invited judges made up of representatives from local government, community based organizations, private sector will give the final rating of the projects
- All participants awarded and the winners announced. Winning prizes to include in kind gifts from sponsor companies such accessory gadgets, laptops.
- Evaluation of the training of trainers and the training of students.

PHASE FOUR - August 2016 - Post Project Assessment

- Assessment and evaluation of the projects through interviews, focus group discussions with students, selected families of the girls and trainers of trainers.

Communication Plan

- Personal visits led by the TechWomen alum team and M-Power Ladies to the schools and universities to engage headteachers of the schools and club patrons of the science and STEM clubs. During the implementation of Mombasa Girls in STEM workshop in January 2015, we found this method the most effective communication tool.
- Facebook and WhatsApp groups will be primarily used to publicize the project among the students and then later on to promote the fair. These are the two most popular social media tools in Mombasa for the age group we are targeting.
- Radio; The Mombasa Girls in STEM workshop was featured on one local radio station (pro bono) and we plan to approach more local radio stations to spread the word on the STEM competition as a follow up to the workshop.
- Mombasa County government; approach the local county government to support and promote the fair and invite them to judge projects the students come up with and encourage them to take up solutions from the students for their own implementation.
- SwahiliBox is the planned technology hub that is being set up in Mombasa and will soon open their space. There is an existing relationship with the facilitators there and using their platform is another way to publicize the competition for example on their social media platforms.

Evaluation

Before the start of the curriculum, we plan to issue a **questionnaire/survey** to assess the

attitude of the girls to Science, Technology, Engineering and Math fields. The questionnaire will also ask questions as to what their expectations for the workshop are. A similar survey will be conducted upon completion of the competition. The trainers will also be asked to complete a survey prior to starting the training on what their expectations are and how they plan to sustain the knowledge they receive. We also plan to conduct **focus group discussions** at the end of the project. We will measure the success by the interest the competition generates (e.g. number of people attending the fair) and having the winning project from the girls taken up by the local government or any other interested organization. If we can begin the process of growing a network of girls and women in STEM in Mombasa who can reach out to another for peer mentorship and form an organized unit / central pool from this outreach we know that we are succeeding when the number of girls willing to pursue courses in STEM increases.

Sustainability

We plan to make the fair an annual event supported by local sponsors in Mombasa. The teachers from each high school who we will train will continue to teach the curriculum to the girls in the STEM/science clubs ensuring their continued participation in the fair. We also plan to disseminate the curriculum to the county education ministry with the aim of it being further disseminated to public school teachers in Mombasa. We hope that the winning project will be taken up by the local government especially which will not only encourage the girls to become problem solvers but might also alleviate a community faced problem. The knowledge gained by the target groups will be applied by the girls even after the project.

TOTAL FUNDING REQUESTED

\$21,660.00

PROPOSAL DOCUMENT:

[Download budget](#)

