

SOITSAMBU UPGRADE REPORT
Expansion of Solar and Computer lab (SPARC+)



SCHOOL: Soitsambu Secondary School
LOCATION : Ngorongoro District, Arusha.

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INTRODUCTION AND SUMMARY.

Soitsambu School established in 2007 is a community based boarding school in Ngorongoro District Arusha Region. The School is located at Oloipiri ward whose inhabitants are mostly Maasai. The economic activity is livestock keeping.

Powering Potential first Installed Solar Powered Computer Lab with 5 Raspberry Pi Computers at Soitsambu in 2014, the number of students has grown to over 800. The school properly used and maintained the computer lab which has motivated program funding to upgrade.

The program is implemented by Potential Enhancement Foundation in partnership with Powering Potential Inc. (PPI). The installation and training was completed in Jan 2022.

Our Solution

SPARC+ program upgrades the SPARC(Solar Powered Access to Raspberry Computing) lab by expanding the solar energy system and installing 15 more Raspberry Pi computers for a total of 20 computers.

The upgrade enables the schools to offer the national Information and Computer Studies (ICS) curriculum.

Raspberry Pi small single-board computers (SBCs) developed in the United Kingdom by the Raspberry Pi Foundation in association with Broadcom. The power efficiency makes the Raspberry pi computer the ideal choice for remote schools by making use of renewable and green solar energy .Our computer lab is fully powered by solar energy systems.

Access to Digital Educational Resources. (Remote Access Community Hotspots for Education and Learning) digital library from World Possible. RACHEL includes Khan Academy videos, Wikipedia articles, UNESCO teaching resources, TED Talks, MIT-Scratch coding language, medical reference books, and much more.

SHULE Direct local Digital Content. Platform that provides educational learning content for students and teachers in secondary schools.

ACTIVITIES ACHIEVED

1. Jan 23, 2022 Equipment and staff Transport to Wasso Loliondo.
2. Jan 24 & 25 Solar and Computer Installation
3. Jan 25 – 27 Training and orientation.
4. Jan 28 photo-shoot

IMPACT AND PROGRESS

- 250+ students received post installation computer training
- 40 students enrolled for Information & Computer Studies (ICS) subject
- 870 Students and 26 teachers have access to offline digital Education resources.
- Computer literacy increased as more students access to computer lab
- More students Motivated to STEM (Science, Technology, Engineering, Mathematics) subjects
- General school performance increased due to access of educational contents that facilitate teaching and learning process

CHALLENGES AND SUGGESTION

1. 18 hours of training has been delivered after installation however there is need of follow up training for teachers who are overseeing the computer lab because of Slow rate of adapting the technology.
2. Because of the budget limit for most schools it has been challenging to keep a budget for computer lab maintenance by schools, this makes additional effort required by PEF and PPI to continue supporting the program .
3. The need of more workshops to stimulate the interests of students in STEM(Science, Technology, Engineering & Mathematics) subjects.
4. Need for 4x4 cars which will help project implementation on time , PEF does not own vehicles for staff and equipment transport , in most installations we have been delayed because of a postponed schedule for vehicles that we request from the District. Getting a vehicle for PEF will save costs that are spent on car hiring which are sometimes more expensive.
5. Another challenge we encounter is installation during rain season becomes more difficult for most remote schools such as Soitsambu as access roads to schools are very challenging.

CONCLUSION

The use of solar system and affordable energy efficient computers enable to provide Technological Infrastructure to rural schools so as to teach the national Information and Computer Studies (ICS) curriculum and access to learning digital educational resources. Though online access would be ideal, internet service is sometimes prohibitively expensive in rural areas, so use of offline digital libraries in the form of RACHEL (Remote Area Community Hotspot for Education & Learning) and SHULE Direct is an ideal solution.

We thank PPI for the support and with the same spirit we are continuing to collaborate to implement programs in more schools.

ACKNOWLEDGMENT

It is my great pleasure to acknowledge generosity of all donors and funders of Soitsambu SPARC+ for students and our community at large, Thank you so much Ms Janice Lathen and all at PPI and PEF team for facilitating the funding and implementation of Soit Sambu SPARC+, special thanks to my fellow staff for successfully implementing the program.