Songas

E-learning Centers

Final Report

2024

camara education Tanzania

We are pleased to present the progress report on the E-Learning centre setup project at Mwinyi and Msafiri Secondary Schools. This initiative aims to enhance educational outcomes through technology by improving access to quality education.

About Camara Education

Camara Education Tanzania is a non-profit organisation using technology to improve educational outcomes and empower youth.

Established as a non-governmental organisation (NGO) in 2012, we are part of Camara Education, an international educational organisation working in 5 African countries, impacting over 3.6 million learners.

Camara aims to improve education outcomes using technology from pre-primary to higher learning institutions. We design and implement scalable and sustainable programs combining a holistic package of products and services (hardware, software, content, and warmware) that address the needs of those we serve.

Our mission is to transform education using technology to empower disadvantaged learners. We envision a world where technology-enabled education is accessible to all.

Camara Education believes quality education and youth empowerment are the most excellent tools to alleviate poverty. Over the past 12 years, Camara Tanzania has worked with more than 850 education institutions, trained over 4500 teachers, and installed more than 9500 computers, which impacted over 220,000 learners.

E-Leaning centre Project

Project Overview

For the past 15 years, Camara Education has worked to enhance the integration of ICT into teaching and learning and improve educational outcomes across 5 African countries. Different donors and supporters have funded our work through equipment donations, funding provision, volunteering, and other mechanisms.

Camara engaged SONGAS Limited in 2023, seeking their support to advance dedication technology in public schools. We were lucky to receive generous support for two schools along the SONGAS pipeline. The schools selected by SONGAS are Mwinyi (Mkuranga District) and Msafiri (Kibiti District) Secondary schools, and they will benefit from this edtech project for four years. The project focuses on three key areas;

- Improve ICT infrastructure and systems within the school.
- Strengthen the capacity of teachers and school leaders.
- Building a sustainable model for integrating ICT in project schools.

Each of these project components builds upon the others to maximise outcomes.

Mwinyi Sec School - Mkuranga

- Received 26 Desktop Computers (1 Server)
- One Projector & One Whiteboard
- Network & Electrical Infrastructure Installation
- 5 Days of Teachers Training
- Three days of the School leaders' training

Msafiri Sec School - Kibiti

- Received 26 Desktop Computers (1 Server)
- One Projector & One Whiteboard
- Network & Electrical Infrastructure Installation
- 5 Days of Teachers Training
- Three days of the School leaders' training

Project Design

Addressing Edtech Integration Challenges in Secondary Schools

The project aims to scale and strengthen Edtech integration while building a sustainable model to ensure long-term impact for the beneficiary schools. This is achieved through four major project components, outlined below:

E Learning Rooms Preparation

- Room Renovation (Paint etc)
- Glass Windows & Grill Door

Equipment Installation & Configuration

- Computers Installation
- Power & Network Installation
- Server & Network Configuration

Capacity Building & Stakeholders Engagement

- Teachers Capacity Building
- Edtech Leadership Workshop
- Students Awareness Training
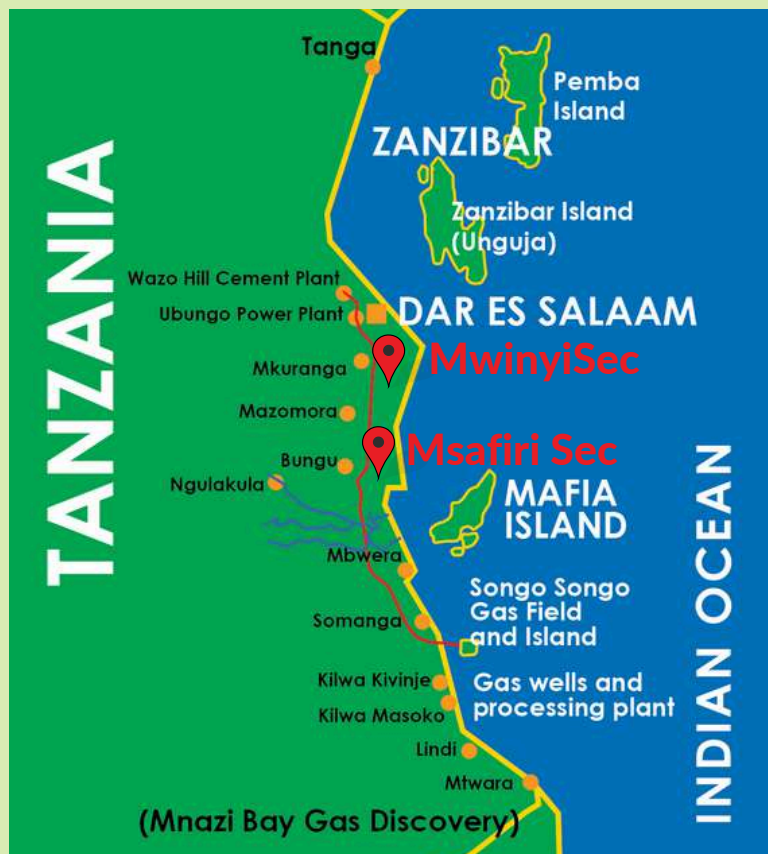- DED, DEO & Other Officials Meeting

Sustainable Technical Support & Retraining

- Remote Technical Support
- Maintenance & Repair
- Refresher Training
- Local Technician Engagement

Project Coverage

Coverage	Beneficiaries	Project Duration
2 District in Coastal Region	**2 Secondary Schools**	**4 Years** From 2024 to 2028

Completed Activities

01 E-Learning Center Renovation

The renovation of the E-learning centres has been completed with grilled doors and windows, painting on walls and ceiling, and wooden door installation. This work was done by local technicians and supervised by Camara.

02 Equipment Installation

We installed 25 computers in each of the eight schools, a local resources server for offline learning materials and a platform for teachers to add digital resources. The server also monitors computer usage via the local area network.

03 Capacity Building & Stakeholders Engag.

We have trained 50 teachers, ten school leaders, and 71 students from two schools. We have engaged 5 district and regional stakeholders, including education officials and ICT officers.

04 Technical Support & Retraining

We will provide ongoing remote support to all two schools visiting on-site technical support, and all schools will receive their first refresher training and maintenance in May 2025.

Activities Summary

📺 **Summary of Completed Activities by 30 June 2024**

Below is a summary of completed activities by 30 June 2024, indicating planned and completed activities. We planned to install labs in both schools and train 20 teachers, 14 school leaders and 600 students by the end of June. The graphs below summarise what we have achieved and what is still pending.

Equipment Installation

● Achieved ○ Planned
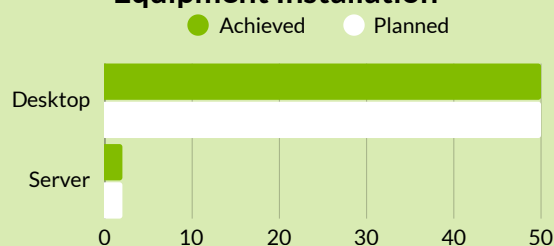
Capacity Building & Stakeholders Engagement

● Achieved ○ Target
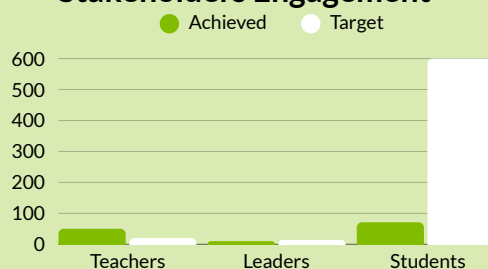
🧑‍🏫 **Trained Teachers**	**250%**
🧑‍💼 **Trained Leaders**	**71.43%**
🧑‍🎓 **Students trained**	**11.83%**

E-Learning Center Setup

🖥 **Renovation, Power & Network Installations**

As described in the agreement with SONGAS, CAMARA will renovate the e-learning rooms and prepare them according to Camara standards. Thus, we installed Grilled & aluminium glass windows, grilled Doors, and four ceiling fans in each room for better ventilation. We repainted the walls and ceiling inside and outside the rooms for a better look. We installed electrical and local area network installations to power up computers and provide local connectivity between clients' computers and servers.

Switch Sockets	Netwrok Outlet	Network Switch	Fans
28	**26**	**2**	**4**
Double Switch per School	LAN Outlet	Two for each school	Min 2 Per School

Equipment Installation

Client Computers & Server

In each school, we installed 25 desktop computers and one local resource server. These computers are loaded with offline apps for different subjects, such as dictionaries, periodic tables, and solar system apps for students and teachers. The server loads different systems and learning resources, such as notes, books, and videos.

Server Functions within The E-Learning Center

☑ Camara Portal

The Camara portal contains supplementary notes in PDF format, videos, and articles that can be accessed offline. It allows teachers to upload resources and track how students are accessing them. The Camara portal simplifies access to learning resources within the school for both teachers and students.

☑ Computer Usage Tracking

The computer Usage tracker monitors computer usage, determines whether educational content is fully utilised, and sends data to the server. The server sends a report to the online dashboard as part of project monitoring and evaluation.

☑ Classroom Management

Installed on the server, this system allows teachers to view and control students' computer screens. It offers features such as screen broadcasting, remote control, remote shutdown, and messaging, which can be useful to facilitate teaching and ensure students are on task.

Stakeholders Engagment

Realising the vital role of stakeholders, we engage them at different levels, from the project design launch to implementation. Before equipment installation, we scheduled meetings with district education officers and district executive directors. We also meet with the school board chairman, school committee members and parent representatives.

After the project launch, we will share a brief report with regional, district, and ward education officers and keep them updated throughout the project's implementation. We will also invite them to the launch event to see our work in the schools.

District

- We had a Meeting with DEO/DED before school visit and installations
- School report will be shared to DEO & REO after project launch

Ministry

- School Board Chair & Parents
- Councillors & Chairman of the Council
- Members of Parliament
- Ward Education Officer

Other Stakeholders

- School Board Chair & Parents
- Councillors & Chairman of the Council
- Ward Education Officer

Capacity Building

For teachers, School leader and students

For effective ICT integration in teaching and learning, we have conducted 20 hours of face-to-face training for teachers focusing on different ICT topics. The hands-on training ensured teachers acquired basic digital skills and gained confidence and tactics to use ICT as an integral part of their teaching rather than as an adjunct. Our focus was on ensuring teachers understand the basics of ICT and basic technology integration in teaching and learning.

Topics covered on teachers training

- ICT awareness
- MS Office (Word, Excel, PowerPoint)
- Offline Learning resources loaded on Computers
- Integration of ICT in teaching and learning (TPACK Framework)
- Basics of Internet & Email

Edtech Leadership Awareness

We conducted edtech leadership sessions with school leaders for 15 hours (3 days) at Msafiri sec to equip them with the skills and knowledge to support edtech within the school. The chairman of the school board, parent representative, and school leader are some leaders who attended the training.

Students ICT Awareness Session

Students at Msafiri were also engaged through a four-hour session focused on ICT awareness and utilising offline learning loaded on computer resources for their learning. Students learned about the importance of ICT through theoretical and practical sessions and interacting with educational resources like the Camara portal.
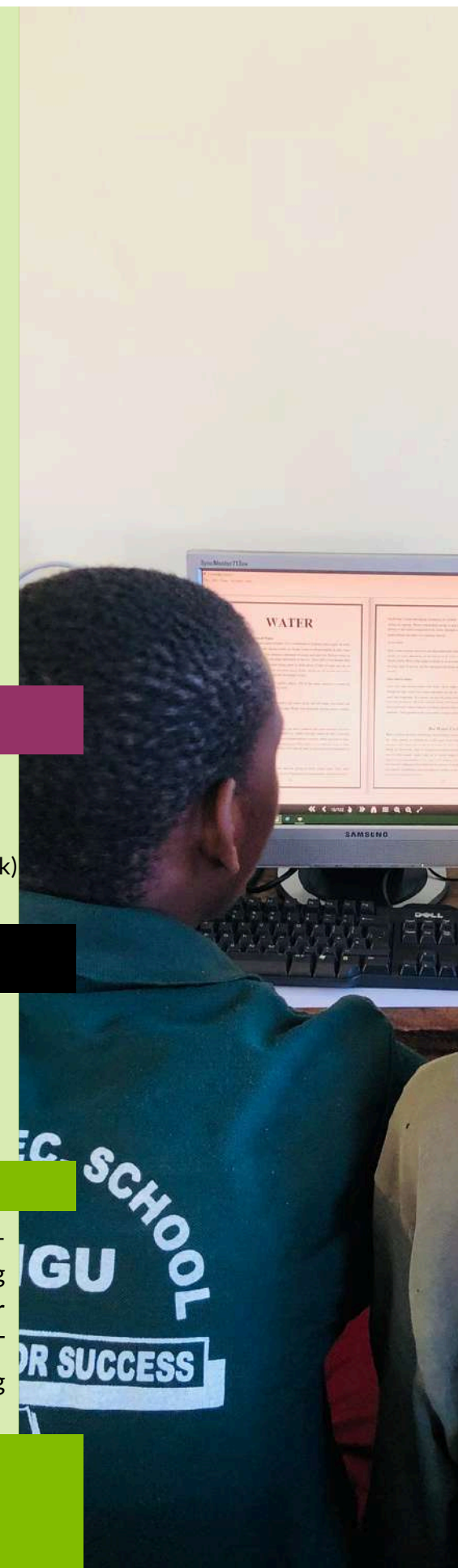
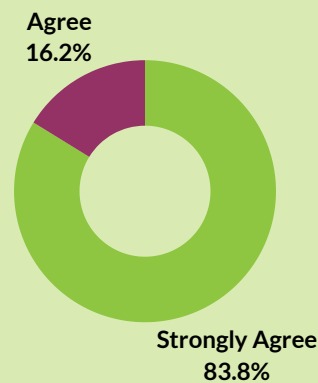| Trained Teachers	School Leaders	Trained Students
50	10	71

Baseline Assesment

Before training, we conducted a baseline assessment of teachers, students, and school leaders to understand their attitudes, experiences, ICT skills, and challenges. They filled out closed-ended questions on the survey form. I've shared below the results of our findings.

Please rate your confidence in using ICT on a scale of 1 to 10
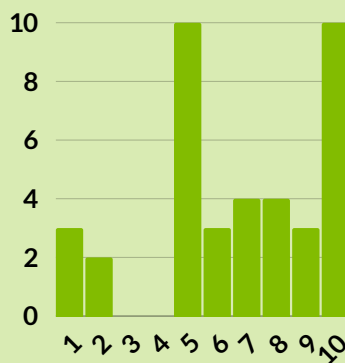
I enjoy using the ICT training equipment and software

Agree
16.2%

Strongly Agree
83.8%

Students Baseline

What class are you?

● Form 2   ● Form 4

Form 2
28.6%

Form 4
71.4%
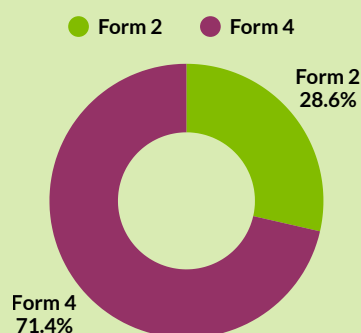
ICT skills are very important for my future (life and career)

Strongly disagree

Agree

Neither Agree nor Disagree

Agree

Strongly Agree

0   1   2   3   4
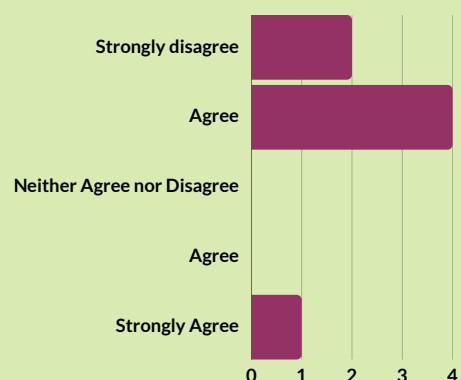
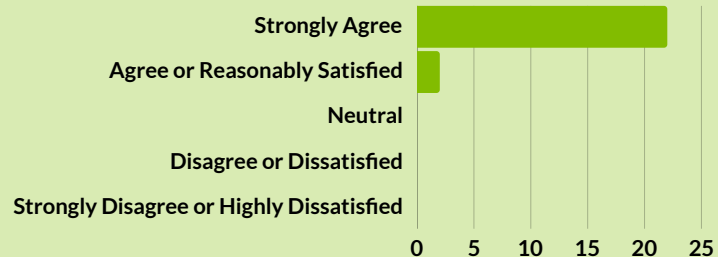# Training Feedback

At the end of each training session, we conducted a feedback assessment to understand training effectiveness and identify areas for improvement in the upcoming training.

How did you rate the training?

- Excellent
- Good

Good
12.5%

Excellent
87.5%
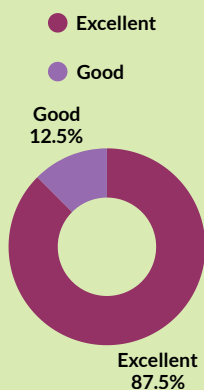
The course was relevant to my current work or career path.

Strongly Agree	
Agree or Reasonably Satisfied	
Neutral	
Disagree or Dissatisfied	
Strongly Disagree or Highly Dissatisfied	

0   5   10   15   20   25

Teachers who use ICT tools to search online content

40%

20%

Teachers who use ICT tools for professional development

Would you recommend this course to others?

Yes

Yes 100%

Teachers who use ICT equipment for the Project subject content (slides, images' etc)

22.5%

Teachers who use ICT tool to prepare students grade book

20%

Project Luanch

🖥️ **Handing Over the Project to Local Government Authorities**

On the 18th of July, we officially launched both the school Msafiri and Mwinyi secondary schools. The event was attended by various stakeholders, including school administrators, teachers, students, and community leaders. They expressed their enthusiasm and support for the project's goals. The launch highlighted the collaborative efforts and the positive impact we aim to achieve in improving educational quality and providing better resources for students and educators.

Ongoing Support

Four Years of Edtech Adoption

Both schools will receive support over four years, including annual refresher training and maintenance visits to ensure the proper functioning of all equipment. Camara will keep Songas informed through yearly progress reports and testimonials detailing the integration of technology into teaching and learning at each school.

Furthermore, Camara will offer remote assistance through phone calls, emails, and remote connectivity to address technical issues. Additionally, all trained teachers will be encouraged to join a virtual teachers' community of practice on WhatsApp, fostering collaboration, learning, and exchanging educational technology insights. Zoom calls will also be scheduled to provide further training and assistance to teachers from both schools.

As both schools have developed their 12-month edtech plan after the leadership training, Camara will support implementing this plan and support school leaders in reviewing, reflecting, and creating a new strategy after 12 months. This ensures that both schools fully own the project for sustainable edtech adoption.

After four years of the project, we believe teachers and school leadership will have the capacity to sustain it and maintain all ICT equipment through the trained ICT teacher.

Usage Data

We track the usage of computers in schools as part of monitoring and evaluation, and classroom servers send usage data every week to indicate how many computers have been used. The data below indicates the computer usage since the lab was set up in June. The computer usage shown below has been low due to the school holidays. We expect the usage data to increase now that the school has reopened, and we will continue to monitor the usage.

Daily Usage Average (in Min)

● June ○ July
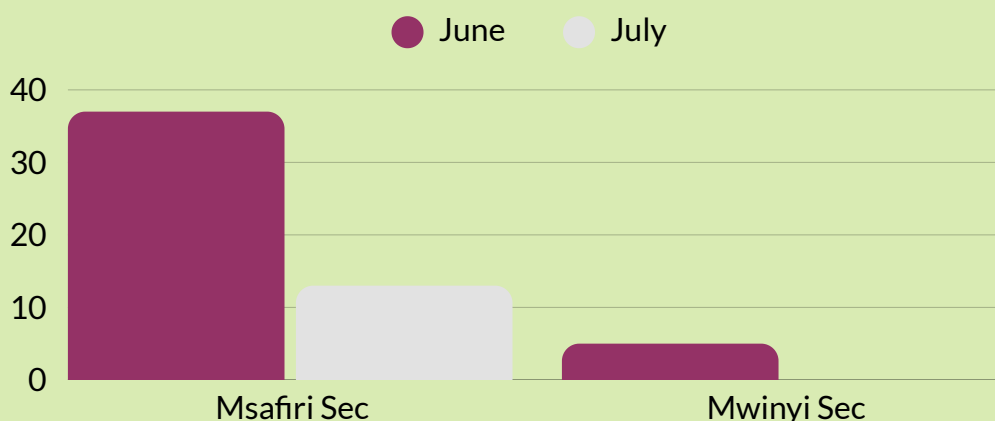
Popular App & Files used

Applications Usage Table

Application

Windows Explorer

Microsoft Word

VLC media player

EdPortal

Encarta

Microsoft Excel

Search application

Solitaire & Casual Games

The graphs below indicate the popular apps and resources utilized by schools since we set up the lab

Usage Distribution (Content Wise)

● Document   91.27%
● Video   7.22%
● Other   1.51%

4,777.19
TOTAL
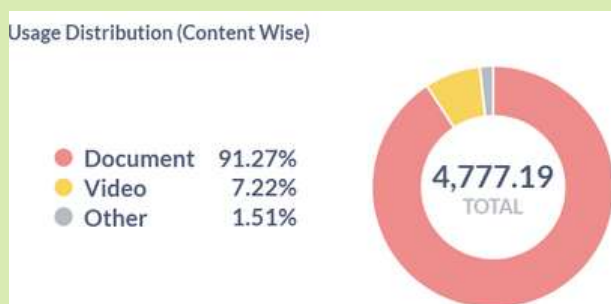
Project Impact

🖥 Digital Skills for Students & Teachers

Both teachers, students and school leaders have been impressed with the project as it will transform teaching and learning within the school. One of the form four students from Mwinyi secondary stated, "We are grateful that we have got to see the technological revolution at our school before we go. Surely, this is our final year as candidates, but this will still be a real deal for us in the remaining time, and we strongly believe that it will open a way for us shortly."

On the other hand, the board chairman of Mwinyi Secondary mentioned, "With these computers, we could achieve just so much, from teaching students to learning new things. We believe that sharing documents through a portal will simplify our work. All in all, these are what we needed to go forward from here."

📖 ICS Subject & PMC Combination

Despite having qualified teachers and books for ICS, these schools didn't have the information and communication studies (ICS) subject. However, after the project, they enrolled 103 Form I students and delivered ICS subjects from July onwards. Mwinyi Secondary School plans to enrol in advanced secondary school, majoring in computer studies (PMC), starting next year.

🖥 ICT Integration

With learning resources loaded in each computer and on the classroom server, we monitor how these resources are utilised for different subjects, and our upcoming training and other project activities focus on improving ICT integration for both schools.

Next Steps

After the project launch and final training of students and school leaders at Mwinyi, Camara will share a brief report covering these activities with Songas. Camara will also report to district education authorities in both Rufiji and Mkuranga about the completion of project activities.

After completing the project's initial phase, ICT integration has just started in both schools. Camara will focus on fully supporting this process and actively assessing its effectiveness and impact.
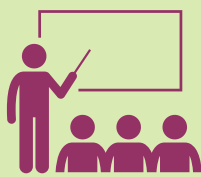
Additional Training

Since the initial training was conducted on holiday, we have plans for students' Edtech awareness training for both schools in early August and leadership training for Mwinyi Secondary by the last week of July.

Monitoring & Evolution

We are actively monitoring the usage of all equipment in both schools to ensure they are effectively utilised. ICT teachers, heads of schools and District Education Officers will receive monthly usage reports.

Refresher Training, Tech Support & Reporting

As described in previous sections, refresher training, maintenance, and technical support will continue for the next three years, and Songas will be updated annually on project progress.

Thank You

Education is a cornerstone for sustainable economic development and the advancement of any community. This initiative aims to enhance educational outcomes for numerous young individuals residing along the gas pipeline, a feat made possible through the invaluable support extended by SONGAS.

We thank SONGAS for their benevolence and dedication to uplifting communities along the gas pipeline, underscoring education as a potent instrument in alleviating poverty.

We appreciate the collaborative efforts of local government authorities, school administrators, educators, and students from both institutions. This marks the initial phase of a promising journey toward fostering positive change and prosperity within the communities along the gas pipeline.

Address
P. O Box 13484, Block 3, Plot No. 47,
Engaruka St, Kurasini, Temeke, Dar es Salaam.

Telephone
+255 623 396 600 / +255 758 396 600

Website
camara.org

Total Available Devices in All Schools

Name of Region	Region	District	CPU	Monitor	Server	Switch	Mice	Keyboard
Msafiri sec	Pwani	Mkuranga	25	26	1	2	26	26
Mwinyi sec	Pwani	Kibiti	25	26	1	2	26	26
Total			**50**	**52**	**2**	**4**	**52**	**52**

Training Data From All Schools

Name of School	Region	District	Teachers Trained	Leaders Trained	Students	ICT Club Members
Msafiri sec	Pwani	Mkuranga	28	10	53	0
Mwinyi sec	Pwani	Kibiti	22	0	18	0
Total	**1**	2	**50**	**10**	**71**	**00**

Link to Schools Album

- PHOTOS FROM MSAFIRI SECONDARY SCHOOL- KIBITI
- PHOTOS FROM MWINYI SECONDARY SCHOOL - MKURANGA

Launch Event Album

- LAUNCH EVENT - MWINYI SECONDARY SCHOOL - MKURANGA
- LAUNCH EVENT - MSAFIRI SECONDARY SCHOOL - KIBITI

Links to Monitoring & Evaluation Data

- MSAFIRI SECONDARY SCHOOL- RUFIJI
- MWINYI SECONDARY SCHOOL - MKURANGA

Media Coverage for the Project

TV Station	News Paper	Other
Azam	Habari leo	U-fm Radio
TBC	Mwananchi	ALU TV
Clouds	The Citizen	Main Digital
TV E	Daily News	EFM Radio
Upendo TV		IBN