STEAM PROGRAMME

DA4TI
Digital Agenda for
Tanzania Initiative

Report

On the 1st of February 2024, the Digital Agenda for Tanzania Initiative (DA4TI) successfully launched its Science, Technology, Engineering, Arts, and Mathematics (STEAM) programme at Bundikani, Mwanalugali and Bibi Titi Mohamed Secondary Schools.

PRIMARY OBJECTIVE

The primary objective of this initiative is to provide ICT training to students at Bundikani, Mwanalugali, and Bibi Titi Secondary Schools in the Coast region of Tanzania, benefiting 160 students directly and over 3,024 students indirectly. The anticipated result is an enhancement in students' awareness of ICT, improvement in academic performance, and an overall improvement in their quality of life by addressing challenges related to information and communication technology. The schools will be equipped with dedicated computer labs, fostering a healthier learning environment for the students. Additionally, teachers in these schools will gain valuable ICT skills, contributing to the sustainability of digital inclusion efforts.

Specific goals

Objective 1:

Empower Students through ICT Training

Objective 2:

Joint online exchange

Objective 3:

Provide accessible ICT devices

Objective 4:

Enhance ICT Infrastructure in selected secondary schools

Objective 5:

Facilitate teachers ICT Training

PHASE ONE: Steam Outreach Impact in Numbers

110 students from Bundikani and Mwanalugali secondary schools participated during the phase one traineseship.

However, this Steam outreach programme seeks to reach to 3024 students in Bundikani, Mwanalugali, and Bibi Titi Secondary Schools will directly benefit from the project.

Mwanalugali Secondary school has 818 students while Bundikani has 1996 students, as for Bibi Titi Secondary School, located in Rufiji, Pwani Region, currently has 210 female students from form One and form five.
Students encompasses both gender meaning 60 girls and 50 boys from 1 to form 5.

A total of 8 sessions were covered during the phase one traineeship which took one month.
These sessions were facilitated by 3 facilitators.
Everyday session included 50 students per class in each school.

Day 1 Highlights

1: Introduction to Informatior and Computer Studies

Presenter: Emmanuel Chenge

Mr. Emmanuel Chenge introduced students to the Digital Agenda for Tanzania Initiative and elucidated the significance of information and computer studies in the modern educational landscape. He emphasized the relevance of the subject and its potential impact on the students' academic and professional journeys.

2: The Role of ICT in Daily Life

Facilitator: Shadrack Christopher

Shadrack Christopher delved into the practical aspects of ICT, shedding light on its vital role in daily life. The session aimed to demonstrate how ICT is intertwined with various facets of our daily routines and underscore its importance in the contemporary world.

3. Basic ICT Terminology

Facilitator: Mr. Emmanuel Chenge

Mr. Emmanuel Chenge guided students through fundamental ICT terminology, ensuring they are well-versed in the language of technology. Understanding these terms is crucial for navigating the digital world and forming a solid foundation for further ICT studies.

4. ICT Opportunities and Threats

Facilitators: Mr Shadrack

In this session, students explored the vast opportunities that ICT offers, such as enhancing productivity, enabling innovation, and facilitating communication. Additionally, they learned about the potential threats associated with ICT, including cybersecurity risks, data breaches, and privacy concerns. This balanced perspective helps students appreciate the dual nature of ICT in the modern world.

Conclusion

The launch of the STEAM programme in these schools marked a significant milestone in the Digital Agenda for Tanzania Initiative's commitment to advancing education in the region. The enthusiastic participation of students, coupled with the dedication of volunteers and educators, promises a successful and impactful STEAM journey for all involved parties. The programme sets the stage for a dynamic learning experience that will undoubtedly contribute to the students' academic and professional development.

This report provides an overview of the activities and key highlights from the inaugural day of the STEAM programme. Subsequent reports will continue to document the progress and achievements as the programme unfolds.

SECONDARY SCHOOL ICT CURRICULUM

Grade Level: 9-12
Semester 1: Introduction to ICT

Weeks 1-2: Introduction to ICT

- Definition of ICT
- Importance and relevance of ICT in today's world
- Basic ICT terminology

## Weeks 3-4: Computer Fundamentals

- Hardware components and functions
- Software types: system software vs. application software
- Operating systems: Windows, macOS, Linux

Weeks 5-6: Introduction to Digital Citizenship

- Online safety and responsible internet use
- Cybersecurity awareness
- Copyright and fair use

Weeks 7-8: Basic Computer Skills

- Typing and keyboard shortcuts
- File management
- Basic troubleshooting
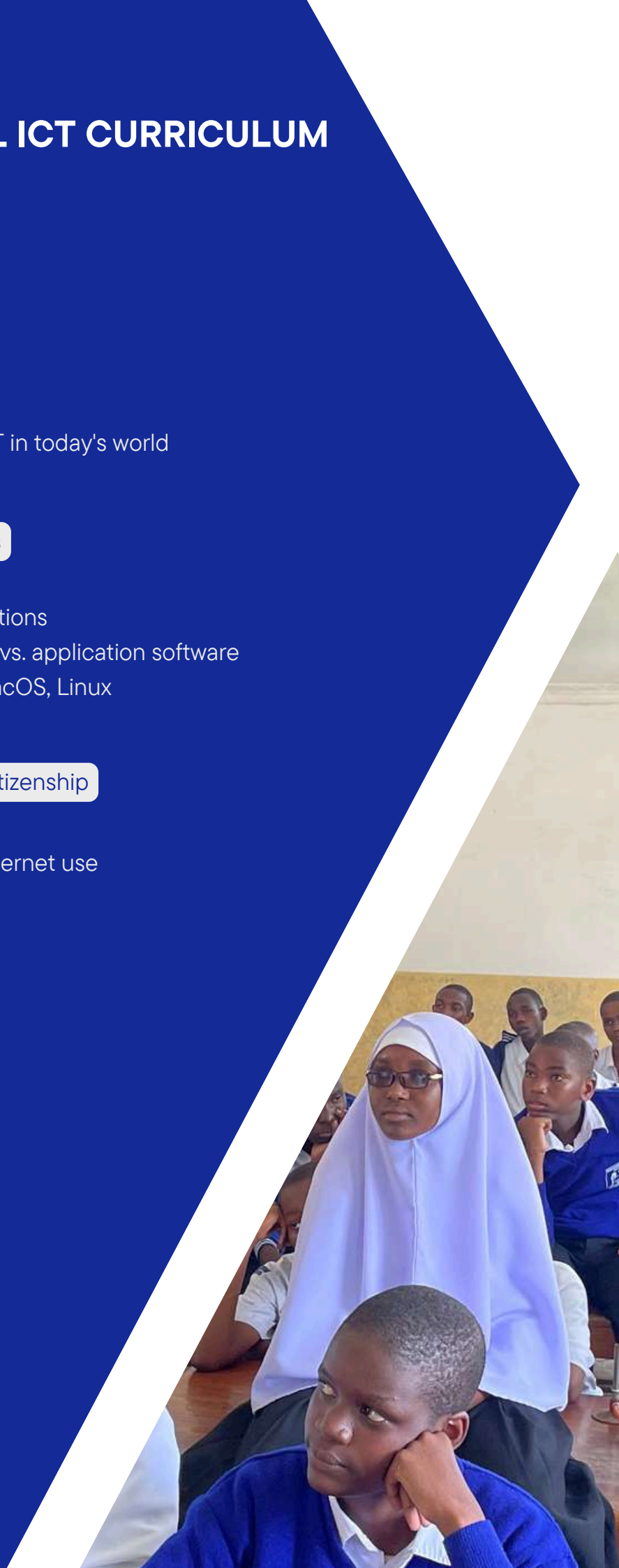
Semester 2: Core ICT Skills

Weeks 1-2: Word Processing

- Introduction to word processing software
- Formatting text and documents
- Creating and editing documents

Weeks 3-4: Spreadsheets

- Introduction to spreadsheet software
- Data entry and formatting
- Basic formulas and functions

Weeks 5-6: Presentation Software

- Creating effective presentations
- Adding multimedia elements
- Presentation delivery skills

Weeks 7-8: Internet and Research Skills

- Effective web searching techniques
- Evaluating online sources
- Proper citation and referencing

Semester 3: Web Development Basics

Weeks 1-2: Introduction to HTML

- Basics of HTML
- Creating a simple webpage

Weeks 3-4: Introduction to CSS

- Basics of CSS
- Styling webpages

Weeks 5-6: Introduction to JavaScript

- Basics of JavaScript
- Adding interactivity to webpages

Weeks 7-8: Group Project - Simple Website

- Collaborative creation of a basic website
- Presentation of the website to the class

Semester 4: ICT Applications and Final Project

Weeks 1-2: Introduction to Database

- Basics of databases
- Creating and querying a simple database

Weeks 3-4: Graphic Design Basics

- Introduction to graphic design software
- Creating simple graphics

Weeks 5-6: ICT in Business

- Role of ICT in business
- Introduction to business software

Weeks 7-8: Final Project - ICT Portfolio

- Collaborative creation of a basic website
- Presentation of the website to the class

Students create a portfolio showcasing skills acquired throughout the course presentation of portfolios to the class.

Assessment:
Regular quizzes and assignments
Midterm and final exams
Participation in group projects

Note:
Continuous emphasis on ethical and responsible use of ICT.
Adapt content and pace based on students' proficiency and engagement.
Regularly integrate real-world examples and case studies.
Feel free to adjust the content, duration, and assessment methods based on the specific needs and resources available in your educational context.