

***Tackling Technical Skills  
Shortage Through Technical  
Education***



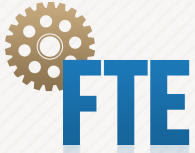
## ***Why Technical Education?***

***“We believe that through technical education, citizens can be provided basic tools to participate in the development and maintenance of technologies in their own communities, contributing to job creation, economic development and an improved society.***

***In today’s information age, technical education has never been more key to long-term sustainable development that benefits all.”***

***FTE Founders***





# Why FTE was Founded

## What?

When an elevator breaks down in East Africa you need to fly in an expert from abroad

## Why?

The education system is focused on theory rather than acquiring practical skills – A teacher-centred approach to training

## KIITEC International Training Centre



**No Skilled Technicians**

## The Solution

Build a world-class technical training institute with a hands-on and student-centred approach to education





# *Education and Technology for All (I)*

**Step 1: Buy the land – 6.5 ha**







## *Education and Technology for All (II)*



**Step 2: Build the school - 1500 m<sup>2</sup>**





# *Education and Technology for All (III)*



**Step 3: Recruit & train teachers**





# *The Kilimanjaro International Institute for Telecommunications, Electronics & Computers (KIITEC)*



Using modern learning technologies, **KIITEC** educates skilled and competent technicians to meet the needs of local industries based on the FTE Education Model. Successful graduates are awarded a 3-year National Technical Award Level Six (NTA-6) Diploma.



## *Delivery Method*

### **1. Diploma Programs**

Based on a 3-year diploma program we focus on:

- Electronics & Telecommunication Engineering
- Industrial Automation
- Computer Engineering and Networking
- Renewable Energies, Environmental Impact

### **2. Short-Term Professional Training Programs**

Running from 3-6 months, we offer 25 certificate courses in electrical engineering and industry automation.

### **3. Training Programs on Demand**

Taught on-site at enterprise locations throughout East Africa, we provide custom-made training courses taught by our international experts outsourced from across the world.





## *A Global Effort (I)*



**FTE** is supported by partners across the industry to ensure our schools are equipped with the tools needed to provide quality technical education.

Partnerships include educational institutes, non-profit organisations, governments, foundations, and private enterprises.





## *A Global Effort (II)*



We understand that local communities are often better positioned to find the solutions to their own problems.

Our Training Programs rely on shared responsibilities but local ownership, entrusting the coordination and management to the local leadership team of the schools.





# 5 Principles of Education





## *5 Principles of Education*



The **FTE Education Model** is based on a **student-centred approach** to education, with emphasis on:

- Hands-on training where each student learns through **real-world industry simulations**
- **Fully-equipped classrooms** with state-of-the-art learning equipment
- 2:1 student/equipment ratio to ensure each student has **the opportunity to master each skill**





## 5 Principles of Education



All **teachers are hired locally** and undergo an intensive 6-month training course led by international experts. The focus is on **skills acquisition and proficiency testing** rather than an overemphasis on theory. 3 modules are followed:

- 1) Technical Training:** Teachers undergo hands-on training instruction ensuring teachers can teach each lesson and expertly perform a demonstration.
- 2) Pedagogical Training:** Teachers are taught how to base each lesson on a student-centred approach. This means that the teaching style is adapted to the students' needs, interests, abilities and learning styles.
- 3) Practical Training:** With the aid of a coach, the teachers have the opportunity to practice their newly acquired practical and pedagogical skills.



## 5 Principles of Education



At each step of the process we leverage our unique experience in the field to ensure that thorough technical industry needs assessments are conducted to ensure the **curriculum is aligned with the labour market demands**.

Members of our team travel throughout regions in need to **forge relations with local industries** for internship and job prospects and determine which skills are most needed.

With 100% employment rate as the objective for graduates, each student receives **one-to-one mentoring** to support their transition into the workforce. A CV writing course and job interview skills training series is conducted annually by our international volunteers.





## *5 Principles of Education*



Educating skilled and qualified technicians goes **beyond the training of basic proficiencies**. The curriculum, delivered in English, includes a strong focus on the **development of business management and entrepreneurial skills** in order to build better-rounded graduates entering the workforce.

The education programmes instill a **strong sense of discipline** that is meant to **build and encourage the professionalism** needed to prepare each graduate for the workforce.

**Professional mentoring** is offered to Alumni pursuing entrepreneurial careers after graduation.



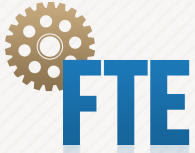
## *5 Principles of Education*



Our scholarship programme is **based on meritocracy** and offers support in tuition, uniforms, education materials and daily lunches, **providing the opportunity of education** for those who are particularly disadvantaged.

We promote **equal opportunities for the enrolment of both young men and women**. Young women face particular challenges in the technical field, therefore we encourage their success by **creating an environment where girls can succeed**.





## *Quality Control (I)*



**Quality education** requires a commitment from all involved. Our aim is to produce skilled technicians prepared to succeed in their careers with no additional training needed once they are hired.

Our **Quality Control Programme** ensures:

- All education centres are efficient
- The teaching approach is consistently student-centred
- The students' educational needs are fulfilled



## *Quality Control (II)*

*External auditors perform the three stages of the audit each semester.*

- 1. Classroom Audit:** Sit in classrooms to observe trainings and student behaviour. Focus is on the content and how it is being delivered, to ensure that each lesson is student-centred and taught in a way that is understandable by all students, not just the best students in the class.
- 2. Student Evaluation:** Every student is evaluated to determine their progress. A two-hour written technical test is administered as well as individual practical lab exercises to demonstrate practical knowledge and equipment comprehension.
- 3. Management Operations:** The auditor meets with the management team and teachers to review performances.





## *Success Stories*

**89%** of our graduates have highly skilled jobs

**62** African businesses working with our graduates

**7** Entrepreneurial start-ups





# But what's next?

## How can we do more?





# Scaling-Up

How Can We Replicate and Scale the FTE Education Model (KIITEC)?

Replicating the school

Construction



New school  
initial cost = \$2,000,000



OR

Replicating the FTE Education Model

Content



Partner training centre  
initial cost = \$480,000





# *Becoming a Centre of Excellence in Technical Education*

## **What the Technical Institution Provides**

### **Hosting Facilities**

Classroom and laboratory

### **2 Teachers and 2 Assistants**

Qualified and motivated educators prepared to undergo further training

### **Electricity**

A stable supply at 230V

### **Acceptance of our Quality Control Plan**

To ensure students are receiving the best education possible

## **What FTE Provides**

### **All Equipment**

Benches and chairs for the labs, scopes, signal generators, power supplies, multimeters, components etc.

### **Teacher & Assistant Training**

A six-month Training seminar based on 3 modules:

- Technical Training
- Pedagogical Training
- Practical Training (in the classroom)

### **All Training and Examination Materials**

Targeted learning materials in line with programme goals

### **Fully Implemented Quality Control Plan**

Professional external audits conducted each academic semester





## *What's Ahead*

Spreading FTE's Model Throughout East Africa (and Beyond!)



### **Our ambition for the future:**

#### **Kenya**

1-20 Partner Training Centres

#### **Tanzania**

4 Partner Training Centres

#### **Burundi**

1 Partner Training Centre

#### **Rwanda**

1 Partner Training Centre

#### **Zambia**

1 Partner Training Centre



## *Contact Us*

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