



## **Curriculum Vitae**

Name: Michael Muchoki Waititu; Born June 6<sup>th</sup> 1957

Profession: Teaching

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## **Education Background**

### **YEAR 2010: Kenyatta University**

Enrolled for PhD, currently I am at Proposal Development level and earmarked for a one year Sandwich study program at Syracuse University, under USAID funded project for Partnership between School of Education Kenyatta University and the Syracuse University for staff development.

### **YEAR 2004: Kenyatta University**

Graduated with Master's Degree in Science (Physics) Education: Course Work and Thesis (Exploring Teachers' and Students' Perception of Difficulty in Topic Areas of the Kenya Secondary School Physics Syllabus)

### **YEAR 1984: University of Nairobi, Kenyatta College:**

B Ed- Science with emphasis on Physics and Mathematics

### **Year 1980: Kenya Science Teachers College**

SI Teacher Certificate: Major in physics and mathematics; Minor in Chemistry

### **Certificates related to teacher training**

- a) Year 1998: Certificate in Practice of Science Education – Hiroshima University
- b) Year 2007: Certificate in Instructional Design

## **Employment Record**

Served at Kenyatta University since 2009 to date

Served under Teachers Service Commission, Kenya since 1980 to 2009

## **Competencies**

### **a) High School teaching**

Taught physics and mathematics in a number of High Schools in Kenya, from 1980 to 1990, with intermittent break for undergraduate studies between 1980 and 1984. Actively participated in patronising students' welfare (CA and Chess) and academic (Drama and science) clubs; was Head of Physics Department and latter on promoted to school Principal.

### **b) Diploma Teacher Training colleges:**

1990-1991: Kagumo Teachers College, Nyeri

1992-1998: Kenya Science Teachers College, Nairobi

Lecturing in physics subject content and teaching methods; supervising teaching practice; Chaired the Tutors' Association; Patronised students' welfare (CA, Chess, and Karate)

### **c) In-Service Provision to Mathematics and Science Educators – Primary and Secondary Education levels**

**1998 to 2009:** Centre for Mathematics, Science and Technology Education in Africa (CEMASTEA).

### **Duties and responsibilities at CEMASTE A, serving for Kenya and a host of other countries in Africa:**

1. Training Trainers and providers of INSET for mathematics and science teachers;
2. Facilitating workshops for secondary school principals; District Education officers and Quality assurance and Standards officers on:
  - a. management of SMASE (Strengthening of Mathematics And Science Education) INSET system, and
  - b. advocacy and support of quality implementation of mathematics and science education in secondary school
3. Administrating Physics Education Programs in the SMASE INSET system, and
4. Chairing Task Force for Monitoring and Evaluating SMASSE INSET system activities

### **d) Pre-Service Teacher Training at Kenyatta University**

Lecturing in Instructional Methods (ECT 202); Educational Technology and Media (ECT 300); Subject Methods, Physics (ECT 306); Methods and Trends in Physics Education (ECT 527); and Strategies for course development, analysis and assessment in physics (ECT 528)

## **Duties and responsibilities at Kenyatta University:**

1. Coordinating the Departmental teaching of the Institutional Based Programs (IBP) and Open and Distance Learning (ODEL) Programs
2. Mentoring students to be able to adjust well for development of their characters / personalities and academic achievement

### **e) Exposures**

#### **1. Organisation and Facilitation of workshops and Conferences:**

- i) Regional Conferences for SMASE – WECSA (Strengthening of Mathematics and Science Education in Western, Easter, Central and Southern Africa) –

The conference in Kenya – Year 2001 and 2002; The conference in Ghana – Year 2003; The Conference in South Africa – Year 2004, and the Conference in Rwanda – Year 2005

- ii) Joint Workshop with:

- a. Malawi – Sensitisation workshop for mathematics and science educators on SMASSE Kenya Project approach in January 2002 and TOT workshop in March/April 2003
- b. Zambia in January 2003 – Sensitisation workshop for Provincial officers on principles and operations of an INSET system for mathematics and science teachers;
- c. Nigeria in September 2004, Sensitisation workshop for science stakeholders on the SMASSE Kenya approach to strengthening mathematics and science Education;

#### **2. Technical exchanges**

- i) In June 1999 to Uganda to study implementation of In-Service Secondary Teacher Education Project (INSSTEP)
- ii) In February 2005 to Zimbabwe: Discussion for collaboration between SMASSE Kenya and Southern Africa Consortium for Monitoring Education Quality (SACMEQ) and National Education Statistics Information System (NESIS). SACMEQ and NESIS are organisation of Association for Development of Education in Africa (ADEA), and they are based in Zimbabwe

#### **3. Technical support services:**

- i) Malawi in July 2004– Facilitating Project formulation workshop for key stakeholder in mathematics and science education
- ii) Nigeria in January and June 2006 – Assisting in project formulation, and in January/February 2007, facilitating workshop on design of monitoring and evaluation system, adapting instruments, Administration of instruments and how to analyse data using computer programs.
- iii) Senegal in October 2008 – assisting in project implementation and construction of monitoring and evaluation system

4. **Monitoring and evaluating** impact of Third Country Training Program on ASEI (Activity; Student; Experiment; Improvisation) movement and PDSI (Plan; Do; See; Improve) approach.

In May to July 2005 in Malawi, Zambia, Rwanda and Zimbabwe

5. **Exhibition of Teaching and Learning Materials** in Science and Mathematics during the Third Conference of Ministers of Education in the African Union, South Africa, August 2007.

During the exhibition I networked for CEMASTE A and disseminated information on some of the works of CEMASTE A:

- Improvised teaching/learning materials;
- SMASSE INSET Instruction manuals;
- ASEI/PDSI demonstration lesson (in a video)
- Display of simple teaching and learning experiments/activities;
- Brochures, newsletters and Posters;

#### 6. **Paper Presentations**

- i) Australia, Wollongong, July 2004 – The 11<sup>th</sup> Conference for World Council for Curriculum and Instruction

**Title: Enhancing classroom Practices through ASEI/PDSI**

- ii) Britain, Oxford, September 2003 – International conference on Education and Development

**Thematic area: Measurement and learning: Achievement beyond the mainstream**

**Title: Evaluation of Human Resource Development type Project: The Case of SMASSE Project, Kenya**

- iii) UNAS- KNAS Project Workshop At Garden Hotel, Machakos, December 5<sup>th</sup> to 6<sup>th</sup> 2008

**Theme: Promoting Best Practices in Science Education in Sub- Saharan Africa**

**Title: Improving Science and Mathematics Education in Kenya: The SMASSE Project Experience**

#### f) **Other competencies**

- a. Year 2005-06: Part-time Lecturer – Physics/Mathematics Subject Methods - at Catholic University for East Africa
- b. Co-Author of Physics book series (Pupils' Book and Teachers' guide) for the new syllabus, with East African Educational Publishers
- c. Chair of the Editing Team:
- i. Instruments for Internal Monitoring and Evaluation for SMASSE Project, March 2003
  - ii. Handbook on Management of District SMASSE Programmes, November 2008

d. Facilitation of Workshops –

- i) KESI Induction workshops for Heads of Departments. Invited to facilitate on diverse dates, during school holidays since December 2006

***Topic: Demystifying mathematics and science in secondary Education***

- ii) Murang'a South Retreat for District trainers from 3<sup>rd</sup> to 7<sup>th</sup> September 2008. Topics I facilitated included:

- i. General Principles for Designing an INSET Write-up
- ii. Cooperative Learning as an Instructional Strategy for Secondary Science and Mathematics
- iii. Analysis/Interpretation of objectives of Math/Science Education

- iii) Workshop for Association of Physics Teachers in Murang'a South District: 24<sup>th</sup> September 2008

***Topic: Constructivist Instructional Strategy (CIS) in Teaching/Learning of Physics***

- iv) Workshop for Nairobi Secondary School Principals and Teachers of Science, Mathematics and Technical subjects

- i. Topic: *Effective Methods Of Teaching Science And Mathematics* - facilitated on 28<sup>th</sup> February 2003:
- ii. Topic: *Overcoming the Challenges in the teaching of Physics* – facilitated on 16<sup>th</sup> Feb. 2002:
- iii. Topic: *The problems and approaches of strengthening Physics education in Sec. Schools* – facilitate on 4<sup>th</sup> May 2002: