TEACHER TRAINING, UTILIZATION AND DEVELOPMENT IN THE 21ST CENTURY

By

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Brief Introduction

❏ Thank you for the Invitation.

❏ Served as Kenyatta Vice-Chancellor for 10 years 2006 to 2016.

❏ Before then, Served as DVC for 4 years.

❏ Served as Chairperson of Association of Commonwealth Universities (ACU) for 2 years and Vice President of International Association of Universities for 8 years.

❏ Currently a Commissioner in the Judicial Service Commission (JSC) Kenya and Chairperson Board of Directors, Kenyatta University, Teaching, Referral & Research Hospital

Plan of Presentation

❏ 21st Century Teacher and Student

❏ 21st Century Education

❏ Preparing Teachers for the 21st Century

❏ SDG-4 Education Target

❏ Pertinent and Contemporary Issues (PCI's) In Teacher Trainin
And Development

❏ Role of technology in learning

❏ Challenges and mitigation strategies.

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Introduction: 21st-century skills

❑ 21st Century Skills refer to the core competencies such as digital literacy, critical thinking, and problem-solving that are crucial in helping students thrive in today's world.

❑ With education reforms in tune with the demands for the 21st Century competitive workforce, it is imperative to have a teacher education program well planned to fit in the rapidly changing world.

What does it mean to be a 21st century teacher?

- ❏ **Digital** - prefers paperless interactions and is an ardent user of technology
- ❏ **Multi-skilled** - possess skills in several disciplines
- ❏ **Innovative** - easily comes up with and implements new ideas
- ❏ **Adaptive** - Can work in any environment
- ❏ **Life-long learner** - willing to pursue his/ her career to higher levels.

Who is 21st Century Student?

❏ **Digital and technologically apt** - likes to use the internet among other digital services

❏ **Younger** - The 21st Century parent is taking their children to school earlier.

❏ **Innovative** - Students are coming up with life-changing innovations

❏ **Entrepreneurial** - dares to start business at an early age.

❏ **Talented** - active in extracurricular activities

21st Century Teacher

21st Century Studen

The Kenyan teenagers tackling female genital mutilation with an app

By **Osman Mohamed Osman**, for CNN

Updated 1054 GMT (1854 HKT) August 1, 2017

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21st-Century Education

❏ **Digital Literacy:**

This encompass simple student tasks, such as creating classroom presentations, collaborative work using digital tools.

❏ **Collaborative Learning:**

This entails use of new applications such as Google Docs in classroom context that enhances innovation and interaction.

❏ **Embracing extra-curricular activities:**

Schools are encouraging and supporting talented students in sports and arts.

❏ **Classroom Diversity:**

Brings together students from all walks of life, including students with special needs.

❏ **Student-centred** - aims to develop skills and competencies in every student.

Preparing Teachers for the 21st Century

❏ Continuous training on emerging issues and curriculums.

❏ Supportive Teaching Environments that enhance growth, innovations and allow in-service training.

❏ Digital and technological support - Financiers need to invest more in schools.

❏ Teacher training on embracing diversity on assisting special needs students.

SDG 4 - Education Target

- By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing states.

❑ Pertinent Contemporary Issues (PCI) in teacher training and development looks at current issues across the three key areas of policy, teaching and practice.

❑ It helps a teacher to think critically on his/her Education course, and to make connections between the processes of learning and the practicalities of teaching.

Pertinent and Contemporary Issues (PCI's) In Teacher Training And Development

- ## Supply of Quality Teachers:

  Difficult to project and produce adequate numbers of trained teachers for both government and private schools because of high number of schools and students enrolled.

- ## In-service Training for Teachers:

  Opportunities for in-service training for teachers and tutors arise only as means of orienting them to new syllabuses or curricula.

Pertinent and Contemporary Issues (PCI's) In Teacher Training And Development

- **Quality of training Schools:**

  Recently we have experienced closure of some institutions which had admitted students to be trained as teachers

- **Promotion of Teachers:**

  It should be based on criteria that all teachers are conversant of as part of their terms and conditions of service.

Pertinent and Contemporary Issues (PCI's) In Teacher Training And Development

- **Litigation:** There has been a sharp rise in court cases instituted by teachers to challenge the Commission's decisions on discipline, transfers, and postings.

- **Unionism**- Sometimes Teachers' Unions hinder and interrupt Teacher Training.

- **Deployment of teacher leadership:**Leadership is a critical component in providing an enabling environment for processes to be actualized.

"The quality of the system cannot exceed the quality of its teachers."

Teacher Preparation at Pre-Service Training

❏ There should be a curriculum that prepares teachers for the 21st century students.

❏ The teacher should be developed to be a facilitator and a mentor.

❏ Embedding 21st century content delivery skills.

❏ Develop competencies to trainers of teachers.

❏ Promote mentorship in the teacher training institutions.

❏ Ensuring strict adherence to teaching practice guidelines and supervision.

Components of Effective In service Programme

❑ **Focused on Teachers' Needs**

❑ **Continuous Support**

❑ **Use of Participatory Approach**

❑ **Collaborative Support:**

They provide opportunities for teachers to collaborate amongst themselves and with respective administrators.

Singapore has developed a comprehensive system for selecting, training, compensating and developing teachers skills.

Key elements of that system are:

❏ Early recruitment while still in training. A stipend is issued to these recruits

❏ Mentorship - master teachers must mentor new recruits

❏ 100 hours of professional development per year

❏ Performance appraisals and rewards to teachers with greatest impact

❏ Career development to: *Master teacher, specialist in curriculum or research, or school leader*

Teaching Utilization

- **This means the use of teachers in a way that responds to both the needs and constraints of the education system and teachers' own capacities and aspirations.**

Strategies for Enhancing Teaching Utilization

- **Include Diverse Content, Materials, and Ideas:** Whenever possible, select topics and materials that reflect contributions and perspectives from groups that have been historically underrepresented in the field.

- **Create an Inclusive Environment:** To the extent that is possible (depending on the size of your class), get to know your students and the individual perspectives, skills, experiences, and ideas that they bring into your course.

- **Encourage a Growth Mindset**: Foster a "growth mindset" by conveying the idea that intelligence is not a reflection of fixed, natural abilities, but can change and grow over time

Strategies for Enhancing Teaching Utilization

- **Teacher Transfers** should among other factors, consider one's specialization and skills so as to ensure they're transferred where their skills are most needed.
- **Effective task allocations** for teachers that encourage sufficient preparation, content delivery and professional development.

- Teacher training in the 21st century can be enhanced by making use of technology.

- This calls for deliberate investment in the use of technology as a medium in the teacher training institutions.

- Technology enables students to be active learners and not passive.

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Technology In Education: The Latest Products And Trends

❏ **Google Balloon -** Free Internet to African countries

Telkom Kenya to launch balloon-powered Internet next year (2019) - Africa's first-ever deployment of this innovative solution to connect unconnected and under-connected communities.

❏ **Google Apps for Education -** Education institutions can use Google Apps like Gmail, Google Drive for FREE

❏ **Microsoft: Mawingu Internet**

   -Low cost public Wi-Fi across Kenyan towns.

Technology In Education: The Latest Products And Trends

Mawingu Wi-Fi Project by Microsoft (Low cost public Wi-Fi)

Loon's technology targets people living in rural areas without sufficient ground stations or fiber Internet connections.*CLIG: Mentoring leaders for Excellence*

Technology In Education

New Technology to deal with low Attendance of Classes, Teaching.

CLASS SIGN IN APP:

Kenyan based software that:

❏ Helps track lecturer & students attendance.

❏ Links Timetable to the Students and the venue.

❏ Generate reports on attendance.

ERP System - System

❑ ERP (Enterprise resource planning) systems enables the institution to control all key functions in by using unified information architecture.

❑ Improved Student Data and Financial Management throughout the entire student life cycle (i.e. from admission to graduation and Alumni).

Technology In Education

A professor teaches an online class with students from around the world.

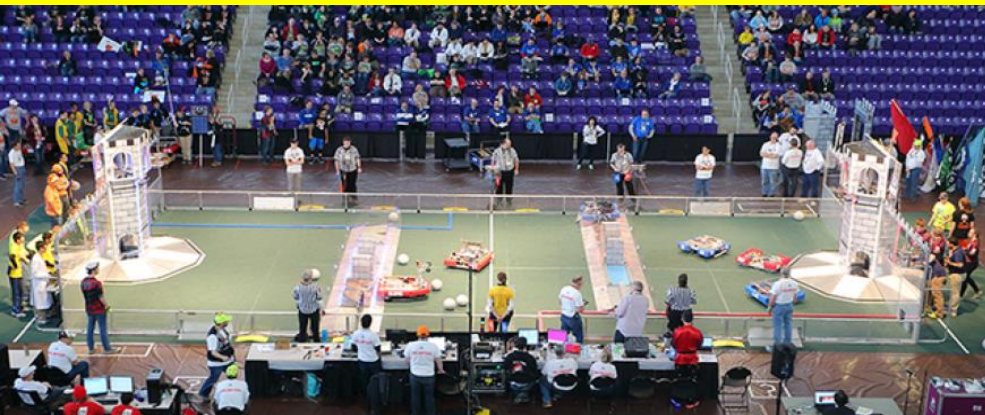**Robots being prototyped by students in University of Iowa.**

❑ The robot sends high-resolution camera images to a head-mounted display worn by the surgeon.

❑ The robot changes position when the surgeon moves his hand over a Leap Motion sensor allowing him to see from a different angle without shifting position or touching the robot.

Technology In Education: Learning Advancements

The FIRST Robotics Competition (FRC) Iowa Regional
(Combining the excitement of sport with the rigors of science and technology)

Robots in a debate at University of Iowa

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CHALLENGES IN TEACHER TRAINING

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Challenge 1: Financing

❏ In-services Teacher Training is expensive due to the complex logistics involved

E.g. KES 500M was used to train 90,000 teachers in CBC

❏ Schools have a limited budget to facilitate trainings for their teachers

Challenge 2: Pre-services Training Curriculum

❑ It has a number of shortcomings

- Insufficient support from lecturers leading to demoralization
- Lack policies on student mentorship
- Weak TP supervision policies
- Un-accreditation of some training colleges
- Unharmonized enrolment requirements to various colleges

Challenge 3: Huge Workloads

❑ The teachers are already overwhelmed with classes thus its difficult to find time to pursue further in-service training.

❑ There is a high pupil to teacher ratio.

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Challenge 4: Low Adoption of Technology in Education

❑ **Pre-service:**

Insufficient computers in most training institutions thus hindering research and exposure of teachers to technology during training.

❑ **In-Service:**

Insufficient supply of computers and digital learning materials to school

Low internet penetration & connectivity in a number schools thus hindering learning methods such as e-learning.

MITIGATING THE CHALLENGES

Solution 1: Financing

❏ Review fund allocations for various in-service learning projects.

❏ Proper use of available resources in the training kitty

❏ To reduce training costs, Train Trainers of Trainers. (A sample representative of teachers who will act as champions)

❏ Alternative funding methods such as

– Grant proposal writing

– Seeking for partners in training

– Seeking scholarships

Solution 2: Curriculum improvements

❑ Frequent Curriculum review.

❑ Universities & Training Colleges should encourage mentorship of teachers in training

❑ CUE, KICD & other regulatory bodies should ensure strict adherence to set standards and policies

Solution 3: Optimal utilization & Having adequate teachers

❑ Optimal utilization of teachers will create adequate time for training and personal development

❑ Hiring more teachers will reduce the workload per teacher thus free them up for in-service training.

Solution 4: Technology

❏ Review ICT Budgets for the various learning institutions.

❏ Encourage change of mindset towards adoption of

emerging technologies in teaching and learning.

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