

# THE TVET EYE

A BOLD VOICE ON THE TVET SECTOR

ISSUE 003 | MARCH-AUGUST 2023



## THIS IS OUR AGENDA FOR THE TVET SECTOR

AN OFFICIAL PUBLICATION OF THE TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING AUTHORITY (TVETA)





## TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING AUTHORITY

9TH JANUARY 2023

### PUBLIC NOTICE

To:

All Heads of public and private TVETs in the Ministry of Education  
All Heads of TVETs in line ministries  
All Heads of public and private VTCs  
All University Vice-chancellors with TVET Institutes/Directorates/Departments  
All Directors of TVET at the county and sub-county level

#### **Reference: Deduction and Remittance of Quality Assurance Fee to TVET Authority**

The Technical and Vocational Education and Training Authority (TVETA) is a public corporate agency established under the Technical and Vocational Education and Training (TVET) Act No. 29 of 2013. The Authority is mandated to ensure and assure the maintenance of standards, quality and relevance in all aspects of training in Kenya as spelt out in Sections 7, 33 and 34 of the TVET Act, 2013 through regular quality audits.

Through circular TVETA/6/2 VOL. II (24), dated 4th of August 2022, TVET institutions were advised to comply with legal notice No. 4983 by declaring their student enrolment and paying the applicable quality assurance (QA) annual fee to the Authority.

In this regard, the Authority hereby reminds TVET providers that:

- 1.0. The Gazette Notice No. 4983 of 26th May 2017 mandates the Authority to levy an Annual Quality Assurance fee of Kshs. 500 per student enrolled in a TVET institution;
- 2.0. All TVET institutions are to declare their trainee enrollment numbers to the Authority quarterly;
- 3.0. Remit to the Authority the quality assurance fee as per the Gazette Notice No. 4983; and
- 4.0. Pursuant to Section 56 of the TVET Act No. 29 of 2013, any person who commits an offence under this Act in respect of which no penalty has been specifically provided is liable on conviction to a fine not exceeding one (1) million Kenya shillings or to imprisonment for a term not exceeding two (2) years or to both.

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## EDITORIAL ADVISOR

Dr Kipkirui Langat - Director General/  
CEO TVETA

## EDITOR

James Momanyi

## EDITORIAL MEMBERS

Mr Timothy Katiambo

Dr Paul Wanyeki

Mr Andrew Too

# EDITORS NOTE



James Momanyi

**I**take great pleasure in welcoming you to the third issue of TVET Eye Magazine, a publication of Technical and Vocational Education and Training Authority (TVETA).

This issue has been dedicated to shed light to some of the reforms and programmes the new Kenya Kwanza government has initiated since HE President Dr William Ruto rode to power in September last year.

Barely two months after ascending to power, the President conceived and rolled out a revolutionary Jitume Lab, a project that is expected to offer over one million youths in TVET institutions skills to explore job opportunities in the digital space. Find out more about the programme in our current issue.

We have also covered exclusively the meeting between the new Cabinet Secretary for Education Hon. Ezekiel Machogu and principals TVET institutions and of managers of TVET in February where the CS spelt out the roadmap for the sector.

There is also an insightful interview with the new Principal Secretary in the State Department for Technical and Vocational Education and Training Dr Esther Thaarua Muri. The PS gives an overview on the sector and new insights on what the government has in the pipeline to improve and rebrand the sector.

In January 24th this year, the country was thrown into mourning after the former Cabinet Secretary for Education Prof. George Magoha passed on. The TVET Authority Board and management took space to pay tribute to the late Prof. Magoha, who spearheaded the ministry during the difficult time of Covid-19 and shepherded the implementation of the new CBC in our basic education institutions and CBET curriculum for the TVET providers.

In the past six months, the Director General TVET Authority Dr Kipkirui Langat has been engaging in a number of programmes and activities locally and outside the country. In this issue, we provide a snippet of some of the engagements the DG has been undertaking in respect to actualizing the Authority's mandate.

Furthermore, the third article of TVET Eye Magazine looks at the 'Changing Landscape of Careers in the Automotive Industry' in the face of rapid technological developments and takes a peek at some of these roles that are in high demand in the gig economy.

As entrepreneurship education and industry linkages with TVET institutions takes shape, the article about the students from the Thika Institute of Science and Technology who are assembling vehicle body parts, would be a great interest to many practitioners in TVET. We hope that other TVET institutions will take the time to read the article and hopefully gain some useful insights.

To all our authors, thank you for making this issue possible and to our reviewers, thank you for helping us in ensuring TVET Eye Magazine achieve the high quality that it aims for. We look forward to further support in our future issues.

I hope that you will find this edition informative as well as entertaining.

Enjoy your read!



## MESSAGE FROM THE CHAIRPERSON



Prof. Florence Indede  
TVETA Board Chairperson

**I**t gives me great pleasure to welcome you to the Third Issue of the TVET Eye Magazine, a bi-annual publication of the Technical and Vocational Education and Training Authority (TVETA).

This issue comes out at a critical time, just months after the country ushered in a new government under the Kenya Kwanza Manifesto, and three months after H.E President Dr. William Ruto appointed a new Cabinet Secretary in the Ministry of Education Hon. Ezekiel Machogu and a new Principal Secretary in the State Department for Technical and Vocational Education Dr. Esther Thaara Muoria. The Board and TVETA fraternity congratulates them for their appointment. We hope and trust that with a combined effort, the TVET sector being one of the key drivers of Kenya's economy will thrive to greater heights.

As a regulatory body, the transformation, changes and debates in the education sector inform a mind-shift of TVETA engagement with government policy makers, education managers, TVET curriculum designers, legislators, development partners, innovators, entrepreneurs, industrialists and employers. TVETA hopes to embrace a trajectory in innovating new skills and knowledge emanating from the awaited recommendations by the Presidential Working Party on Education Reforms (PWPER). We are keen to implement aspect of education and training which will address competencies and skill-based approaches, employability skills and lifelong – learning. The issue of funding education and training in Kenya is key to our entity.

TVETA continues to play its mandate in coordinating and regulating the TVET sector through accreditation of trainers, institutions and programmes, developing of training and regulatory standards, among other functions. The Authority staff effects continuously the programme of institutionalizing quality assurance

by capacity building institutions' Internal Quality Assurance officers and carrying out quality audit in selected institutions.

The greatest focus of the government currently is on how persons in the Jua Kali sector, can be assessed and certified so that they can join formal employment, or even bid for work opportunities in government and private sectors. The Authority has developed Recognition and Equation of Qualifications Standards. Stakeholders forum has been held and input collated. The Standards have been submitted to KEBS for quality check against National Standard for Standards development in Kenya in readiness for gazettelement. Thereafter dissemination will be effected.

Collaboration between the industry and our training institutions is pertinent especially on provision of Industrial attachment to trainees. The Authority has developed the Industrial Attachment Standards and Guidelines, and submitted to KEBS for quality check in readiness for gazettelement and dissemination.

I appreciate combined efforts between the Board and Management on drawing a strategic plan 2022 – 2027. The draft SP has been shared with both internal and external stakeholders for input. The Zero draft was presented to the Board during a retreat in December 2022. We are looking forward for the completion of this process in the coming months.

The Board appreciate the dedication and commitment of the staff in undertaking the Authority's mandate. We also appreciate continuous collaboration with stakeholders, and partners in compliance and aligning to our programs.

On behalf of the Board and TVETA fraternity, I am very grateful for the continued support from the Ministry of Education, which has been instrumental in the fulfillment of our mandate. We remain steadfast and resolutely committed to ensuring that the TVET sector earns its recognition in the community and government priorities.

KARIBUNI NA ASANTENI SANA

## TVETA Board of Directors



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Technical and Vocational  
Education and Training (TVET)



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Ms. Winnie Mwalimu  
Representing CS. National Treasury



Ms. Evalyn Anupui  
Representing PS. TVET

# President William Ruto's grand project equipping over a million youths with skills and jobs takes shape



President William Ruto interacting with trainers and learners in one of the Jitume lab at Kabete National Polytechnic

**T**he revolutionary Jitume programme, which was conceived by President William Ruto with an aim to provide access to digital skills, e-services and online jobs to over one million students in TVET institutions and youths in communities across the country has now taken shape.

The programme, which is designed to complement and build on the successes made by the existing Digital Enablement Programmes such as Ajira Digital & the Kenya Youth Employment Programme, was launched in December 6th 2022 by His Excellency at the Kabete National Polytechnic.

During the launch the President said the Government will invest in digital economy to create employment for the youth since the sector has the potential of spurring growth in the country.

He noted that every home that is connected to power will also be linked to the inter-

net to enable the youth explore economic opportunities online.

“The digital economy will drive growth and create jobs, especially for the youth,” he said.

The President lauded youth for embracing Technical and Vocational Education and Training (TVET) to equip themselves with technical skills that are market ready.

He added that the number of students pursuing TVET courses has increased from 90,000 to more than 500,000 in the last 10 years.

The Kenya National Digital Master Plan (2022-2032) envisages the skilling with ICT skills of over one million youth who enter the job market annually. Training them on ICT and other vocational areas will support the rapid adoption of ICT in business.

Many of these young people cannot access training facilities and this is the gap the programme will address.

The Jitume Lab has been structured in such a way that there are Jitume centres which are deployed at TVET institutions to take advantage of their already existing governance system, ability to attract the critical numbers of youth, as well as the human resource. These Labs have been integrated into TVETs, Constituency and Community Innovation Hubs and other existing institutions.

After the President launched the programme, the government agencies, the private sector and development partners earmarked to implement the rolled out an implementation plan geared at identifying the TVET institution to benefit in the first phase before the programme is implemented in all TVET institutions.

The implementing agencies include the Ministry of Education, through the TVET Authority, the Ministry of Information Communication & Digital Economy, Konza Technopolis Development Authority, UNDP African Center for Technology Studies, Thunderbird School of Global

Management and Association of Countrywide Innovation Hubs together with the innovation ecosystem players in Kenya will be primed to provide online job opportunities through the Virtual Digital Infrastructure (VDI) project in TVET.

By the end of February 2023, TVET Authority had already mapped out 94 TVET institutions across the country, two per county, who will be used as a baseline for this project.

Through Konza Technopolis and other partners, the selected TVET institutions will receive over 20,000 computers which will be used for training as well enable the learners explore online job opportunities in the digital space.

The TVET institutions being considered for the project include National Polytechnics, Technical Training Institutes (TTIs), Vocational Training Centers (VTCs) and Technical Trainer Colleges.

Those considered in the first phase already have ready infrastructure like computer labs and the governance structures that can support all the facets of the programme, including trainers who have been capacity build and coordinators for the programme. The rest of the institutions will come on board in the next phases, after they have been assisted by the government to build the required infrastructure for until we reach out to over one million youths in our institutions and in the communities.

Each Jitume centre will have up to 100 Virtual Desktop Infrastructure with broadband connectivity, reliable power, trained security and program coordinator.

The centres will offer two main programs. The **JITUME CLASS**, which is designed to provide enhanced training on skills for the digital economy that will enable youth access advanced digital jobs. The Class will feature both a physical and virtual program delivery component supported by partners.

The other program is **JITUME KAZI**, which is a work hub/ center, which has been designed to provide an environment to access digitally enabled jobs sourced

locally and internationally through identified partners in a bid to address the unemployment rate in the country

So far, eleven TVETs across the country have benefited from these Private and Public sector collaborations through various technical training programs, provision of infrastructure, laboratories, devices and other equipment to the institutions.

The Government, through the Ministry of ICT has defined major flagship projects that are set to drive the digital sector forward. These projects include; training of citizens and improving the digital literacy of Kenyans, developing of 100,000 Kms of fibre optic infrastructure to learning institutions, government institutions, and health facilities, setting up of 25,000 hot-spots to be deployed countrywide, setting up of 1,450 innovation hubs countrywide and, automation and digitization of all core government services in both national and county governments.

## Each Jitume centre will have up to 100 Virtual Desktop Infrastructure with broadband connectivity, reliable power, trained security and a program coordinator.

The other infrastructure includes six submarine fiber optic cables offering broadband connectivity, 9000 km of terrestrial fiber-optic cable connecting virtually all county headquarters, and geographical and population mobile broadband coverage of 56 per cent of the 96 per cent re-

spectively.

There is also increased access to digital devices across Kenya populace including smartphones and personal computers. The government has invested heavily in ICT laboratories in tertiary institutions which enable access to digital jobs. Basic digital literacy training is compulsory to all youths enrolled in Kenyan tertiary institutions.

The education opportunities in Kenya have seen an ever-increasing number of youths from schools, middle-level colleges and universities joining the labour markets annually. Both skilled and non-skilled youth graduating from education institutions has contributed to the high youth unemployment rate which remains a major challenge in Kenya.

To address this, the government is currently implementing other projects besides the Jitume Programme.

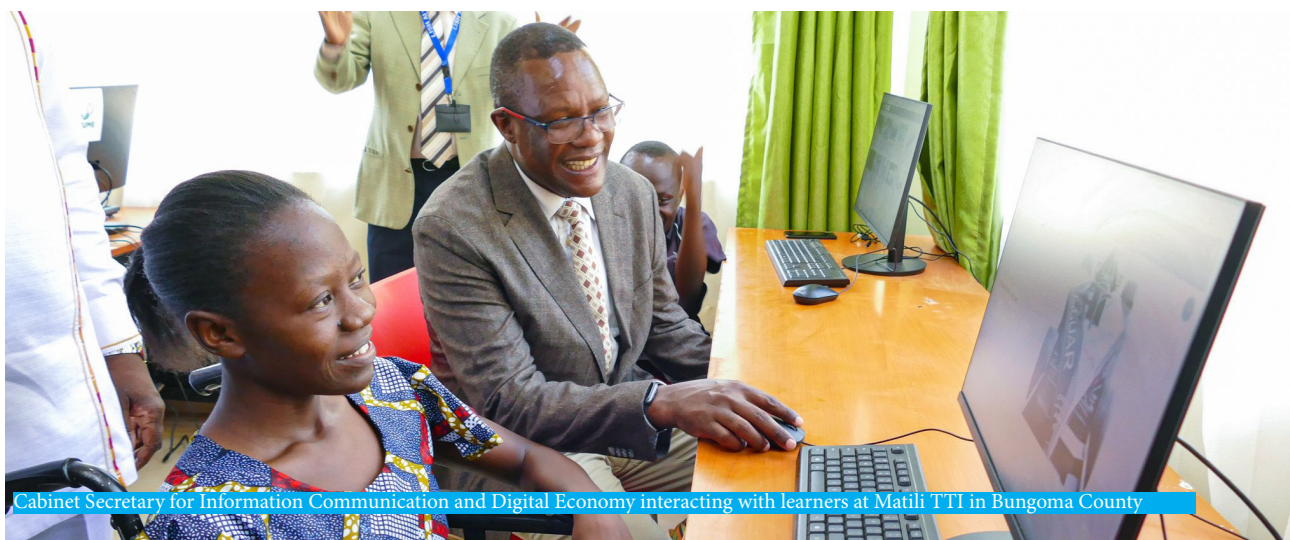
They include the Constituency Innovation Hubs (CIHs) implemented by the Ministry of Information, Communication & Digital Economy in conjunction with the National Government Constituency Development Fund (NGCDF) with a target of establishing 4 Innovation hubs in each of the 290 Constituencies. The objective of this project is to support innovation, entrepreneurship and access to remote work opportunities countrywide by offering free working spaces equipped with devices, bandwidth and furniture.

The Ministry of Information, Communication and Digital Economy through the ICT Authority has also been running the Ajira Digital Program (<https://ajiradigital.go.ke/>) since 2018. The program seeks to position Kenya as a choice labour destination for multinational companies as well as encourage local companies and public sector to create opportunities for digital work. The program offers training, mentorship, and empowerment to youth to access digital opportunities by providing different technology and online work readiness courses to the participants at no cost.

The program offers both basic and advanced trainings such as digital marketing skills, transcription skills, content writing, software development, networking and machine learning among others.



# Cabinet Secretaries Ezekiel Machogu and Eliud Owalo Kicks off the Launch of Regional Jitume Labs in the Counties



Cabinet Secretary for Information Communication and Digital Economy interacting with learners at Matili TTI in Bungoma County

**T**he Cabinet Secretary for Information, Communication and the Digital Economy, Eliud Owalo in February kicked off the launch of regional Jitume Laboratories in Uasin Gishu and Bungoma Counties.

Two weeks later on March 11th, the Cabinet Secretary Education Ezekiel Machogu was also in Meru National Polytechnic and Nkabune TTI, both in Meru County to launch the jitume centre digital lab.

During the launch, the CS Machogu said President William Ruto is passionate about the youth and wants to see hundreds of young people benefit from the free training, adding that the government, working with partners, will create hundreds of decent digital jobs for the Jitume graduates.

The CS encouraged the youth to be self-reliant, acquire the competences and skills which can move the country to the digital level. He was accompanied by PS TVET Dr. Esther Muoria, PS Higher Education Dr. Beatrice Inyangala, PS ICT Eng. John Tanui and CEO Kotda John Okwiri

Through the program, which is being implemented by the Ministry of ICT, Konza Technopolis, ICT Authority, TVETA and TVET institutions, youth from all the 47 counties will undertake various courses online and receive certification upon completion.

Earlier in February the Cabinet Secretary Eliud Owalo first opened the Jitume Labs in Kiziwa TVC and Matili Technical and Training Institute both in Bungoma County before heading to Eldoret National Polytechnic in Uasin Gishu County.

In Matili TTI, the CS noted that 17 Jitume Labs have already been deployed at TVET institutions across the country to take advantage of their already existing governance system, ability to attract critical numbers of youth, as well as human resource.

“We expect them to be all fully operational by the end of February 2023. Trainees at the Kabete National Polytechnic are already beneficiaries, with some realizing their initial earnings from digital jobs. We are intensifying the Digital Talent Pro-

gramme, whose key components are skill development, on-the-job coaching, mentorship, training, certification and ICT innovations,” said the CS.

Speaking during the launch of the Eldoret National Polytechnic Jitume Centre, CS Owalo indicated that by the end of the year, the government will have established at least one lab in each constituency thus benefiting one million youth across the country.

The CS said the Jitume Labs have been deployed at TVET institutions to take advantage of their already existing governance system, ability to attract the critical numbers of youth, as well as the human resource.

“These Labs have been integrated into TVETs, Constituency and Community Innovation Hubs and other existing institutions. Each Jitume Center will have up to 100 Virtual Desktop Infrastructure (VDI) with broadband connectivity, reliable power, Security and program coordinator provided by Konza Technopolis, who are our lead partner in this program,” he said.

The Cabinet Secretary noted that when President Ruto came to power in 2022, he expanded the mandate of the Ministry of ICT and assigned digital economic function to the Ministry.

“This automatically placed ICT at the core of country economic transformation agenda,” he said adding that the jitume program seeks to address issues relating to connectivity devices and digital skills as well as job opportunities targeting the youth countrywide.

In December 2022, President William Ruto conceived the Jitume programme with the aim of complementing and building on the successes made by the existing

Digital Enablement Programmes such as Ajira Digital & the Kenya Youth Employment Programme.

The Principal Secretary State Department of Technical and Vocational Training (TVET), in the Ministry of Education Dr Esther Muoria rallied the youth to take advantage of the facilities and get the training. She committed support from the Ministry of Education.

The Principal Secretary, ICT & the Digital Economy, Eng. John Tanui, rallied the youth to take advantage of the facility and get the training.

“Considering that innovation is a journey and not a destination, it is upon us to make sure that we use the knowledge we have to

create a vibrant economy for our country. I urge all eligible youth to leverage these opportunities and resources provided by the Government free of charge” Said Eng. Tanui.

Bungoma County Governor Ken Lusaka and Uasin Gishu County Governor Jonathan Bii Chelilim rallied the youth to take part in the programme and noted that they will support the project in their counties in a bid to support the digital economy.

The Jitume Program, one of the major flagship projects under the Konza Innovation Ecosystem Initiative, encourages the youth to take it upon themselves to access digital devices to enable them to learn and become certified on digital skills for the Fourth Industrial Revolution.



CS Education Ezekiel Machogu (third left) PS TVET Dr. Esther Muoria(Centre), PS Higher Education Dr. Beatrice Inyangala (Right), PS ICT Eng. John Tanui (Second Left)and CEO Kotda John Okwiri. Also in the picture is Meru National Polytechnic Principal Mutembei Kigige and Chairperson Professor Quantai Mboroki (Second Right)





President William Ruto during the ground breaking ceremony for a new tuition block at Technical University of Kenya

## President William Ruto calls for re-modeling of TUK as a special TVET University

**P**resident William Ruto has said the government will rework the Charter of Technical University of Kenya and turn the institution into a special Technical University.

Speaking during the ground breaking ceremony of new buildings, I Block and T-Block, at the Technical University of Kenya (TUK) the President said the government intends to turn the institution into a model technical university in the region.

During the ceremony, the President also officially opened the S-Block tuition building which has been built at a cost of Sh600 million to ease the pressure of learning space at the institution.

Speaking at the function, President William Ruto said the government is committed to uplifting the state of TVET institutions by providing the necessary financial and legal support in a bid to make Kenya a technical skills powerhouse locally and internationally.

The Head of State lauded the Technical University of Kenya (TUK), for supporting its diploma graduates to pursue university degrees.

“I particularly take this opportunity to commend the university for the system it has put in place to consider the recognition of Prior Learning as well as the multi-entry and multi-exit plan,” said the President.

The President directed the Cabinet Sec-

retary for Education, Ezekiel Machogu to expeditiously work on a plan to support TVET graduates who wish to further their education by providing capitation.

“I have also directed the CS Education to work on a master plan to ensure that necessary capitation is put in place to support TVET students who would wish to further their education,” the President said.

The president, noting the inadequacy of space at the Technical University of Kenya, which is situated at the heart of Nairobi City, directed that the university will be allocated land, to be carved from the Ministry of Foreign for its expansion.

“Having been taken around here and seeing the constraints of space for the devel-



opment of other facilities, I will instruct the ministry concerned to reallocate space for the Ministry of Foreign Affairs for the university expansion,” said Ruto. The president encouraged the university to establish a technological park where all the discoveries and innovations made by staff and students can further be developed and showcased.

Government to review the university charter

He pointed out that Kenyans ought to be proud of the fact that the Technical Institution is a model that has been successfully replicated in many African countries, saying that the government will review the University's charter.

“There will be consultations with the Council and the Vice Chancellor. We shall rework the Charter so that we can establish this University as a special Technical University. TUK should not be just a Technical University by name but Technical University by Charter,” reiterated the President.

On the capitation of institutions of higher learning, the president promised that the recommendations captured by the Presidential Working Party on Education Reforms (PWPER) on funding of educational institutions will be expedited so as to bridge the financial gap that is derailing the operations at the institutions of higher learning.

Others present at the function were Education Cabinet Secretary Ezekiel Machogu and Nairobi Governor Johnson Sakaja, among others.



President William Ruto being shown around the aeronautical and aviation department at Technical University of Kenya



President William Ruto interacting with students in one of the workshops



The New S-Block Tuition building



Education Cabinet Secretary Hon. Ezekiel Machogu addressing the managers and principal of TVET institutions at the Kenya School of TVET

## Cabinet Secretary Education Ezekiel Machogu spells out the new agenda for TVET sector

**E**ducation Cabinet Secretary Ezekiel Machogu has lauded reforms in TVET over the last 15 years, saying they have revolutionized the sector in terms of physical infrastructure and provision of modern training equipment.

The Cabinet Secretary spoke in February 15th this year when he met with principals and managers of Technical and Vocational Education and Training institutions at the Kenya School of TVET.

During the meeting the CS asked principals and county TVET directors to develop mechanisms that appeal to the public to embrace TVET as a pathway for trainees to achieve their career aspirations from Artisan to PhD levels. He said the CBET Curriculum Review is designed to provide specific skills and competencies that match industry requirements therefore, the need to find approaches to fine tune the existing CBET curriculum to meet the industry needs and international standards.

The CS said that one of the policies that require urgent attention is on industrial linkages and called upon technocrats to fine tune the draft Policy Framework on Industrial Linkages for the necessary legislation.

He at the same time appreciated the KATTI leadership for playing an active role in the management and advancement of TVET transformations and recognition of research as a contributory component to knowledge in the society and in achieving global goals of sustainability for TVET.

The CS was however, dissatisfied with the way TVET institutions are relating with the Industry, even as they seek to improve their training and promoting relevance in their training. He made reference to the latest TVETA Quality Audit Report for Public & Private TVET Institutions for the 2021/2022 FY which showed that only 9 out of 400 institutions requested for the feedback from the industry for use in improving their train-

ing. This he noted, shows how weak the linkages between the TVET institutions and the industry are.

“There is need to strengthen and deepen these linkages. This will not only increase your finance base but will also ensure the optimal use of equipment and above all, improve the quality of training and eventually the quality of graduates that you shall be releasing to the market. That is how our TVET sector will be competitive internationally,” the CS said.

He pointed out that in the near future, deployment to the headship of TVET institutions shall be evaluated against an individual’s actual performance in terms of improved employability of your graduates and on numbers of beneficial and profitable industrial linkages that you nurture in your respective stations.

The TVETA report also shows a favourable score for the National Polytechnics. The CS, however, said there is need for the National Polytechnics to improve on



Innovation, Research and linkages where they had a modest average score of 72 per cent.

The CS said National Polytechnics, being the apex institutions in the TVET sector, must be the leaders in Innovation, Research and Industrial Linkages. The Public TVCs, on their part should also foster collaboration with the National Polytechnics in this area so that they can improve on their score which, stands at 44 per cent.

“Some of the new Public TVCs have scored dismally in Leadership Management and Governance, Human Resource, Program Evaluation, Trainee Support and, in addition to Innovation, Research and Linkages. These new TVCs should ensure that they enter into meaningful collaboration with neighbouring National Polytechnics and well established TVCs so that the new TVCs can be receive the much needed mentorship to improve on these scores.”

The CS said that his ministry will not condone the trend and therefore called upon TVETA to strictly ensure that all Public and Private TVET Institutions, put in place a robust internal Quality Assurance system, which shall be subjected to the annual TVETA audit. He warned that TVETA will audit “poor performers” institutions biannually and should they fail to yield to the expectation of the quality assurance audit, their licenses will be suspended and reviewed in accordance with the regulations in case they want to continue training.

Machogu made a clarion call to the National polytechnics in the country to lead by example, by fostering Innovation, Research and Industrial Linkages. He urged the Public TVCs, to forge a seamless collaboration with the National Polytechnics in this area so that they can improve on their score which, stands at 44%.

Machogu also acknowledged the thorny issue of trainer’s shortage in TVET institutions, saying that his ministry is in advanced stage of hiring more trainers to bridge the gap. He said that the TVET subsector is short of around 8, 817 train-



ers which has posed a challenge in attaining the recommended trainer to trainee ratio of 1:30 for business courses and 1:20 for STEM courses.

“To address this shortage, I have been engaging with the National Treasury, which has now approved a phased recruitment of 3,000 additional trainers, starting April of this year. I have already sent out a request to the Public Service Commission to commence the recruitment process,” he pointed out.

The Cs said that he has also requested the Public Service Commission to develop mechanisms to facilitate the recruitment

of trainers on a rolling basis as vacancies arise due to attrition. This, he said, will ensure that vacancies are filled expeditiously on the basis of the existing budget, without having to seek new approvals.

At the same time, Machogu deplored TVET principals and managers for what he termed as suboptimal use of machines and equipment in TVET institutions. He noted that only 10 per cent of the existing equipment has been satisfactorily been utilized. The CS, expressed dissatisfaction with how TVET institutions underperformed in the implementation of the equipment supply under the China project.

“It is also concerning that the only achievement derived from the equipment supplied under the China Project from as early as the year 2012 has been the fabrication and export of spare parts to China worth Kshs. 10 Million only. This is a huge underperformance bearing in mind the huge amounts of capital the Government has put into the China Project,” Machogu said.

The CS called upon the principals and managers to put more emphasize on STEM courses as opposed to business courses, saying that the country has been grappling with shortage of skilled labour in the STEM courses cluster.

Principal Secretary (PS) State Department for TVET Dr. Esther Muoria said TVET institutions must explore options to raise funds to supplement government allocations in order to sustain their financial obligations.

She said the National Treasury fund allocation has not been and will never be sufficient in regard to the increasing number of TVET institutions.

“In Kenya, land is a factor of production and many of our institutions have been allocated huge acreages. Therefore, institutions can leverage on land for production of dairy animals, poultry rearing and other commercial agricultural activities,” Dr Muoria said.

“Again, TVET institutions are equipped with state of the art equipment and workshops which can be turned into production units to generate A-in –A for the institutions,” she added.

**Machogu made a clarion call to the National polytechnics in the country to lead by example, by fostering Innovation, Research and Industrial Linkages.**



# TVET managers to be trained on income generating activities



Principal Secretary (PS), Esther Muoria

**K**enya School of Technical and Vocational Education and Training (KSTVET), has embarked on training the managers of the technical institutions from across the country on income generating strategies in order to enhance effective and efficient management of human and financial resources at the institutions.

The training of the managers has been facilitated through funding by the African Development Bank (AfDB), through the Ministry of Education's, State Department for TVET, for relevant skills development project PHASE II.

The Ministry of Education contracted the Kenya School of TVET, to carry out training of the managers on public finance management and governance, to improve governance capacity at the Institutions, efficacy and professionalism, in line with governance policies, frameworks and structures of TVET Act of 2013 and sessional paper No. 14 of 2012.

Speaking in January this year during the official launch of the training of the Estate Managers at the Rift Valley Technical Training Institute (RVTTI) and the Eldoret National Polytechnic, State Department

for Technical, Vocational and Training Principal Secretary (PS), Esther Muoria, pointed out that the government has established over 120 new TVET institutions, in order to make Technical Education accessible and affordable.

With the establishment of the new TVET institutions with new management in place, the PS said it was critical that the managers are trained, so that they are more efficient and effective in running the TVET institutions.

"We are training our managers across all our institutions in the country, we want our managers trained on institutional management, because we want to make our institutions as strategic as possible, to attract as many trainees as we can, because technical training is very important for our country," said Dr Muoria.

Noting that technical education is key in taking the country to the next level of development, the PS indicated that the Ministry intends to train institutional managers, as well as the procurement and the financial managers, so that they are able to take good care of the TVET institutions, to encourage youth to enroll to the institutions and get trained on the Competency

Based Education Training (CBET) curricula, in order to be strategic and able to carry out all the tasks under their capacity, not only in the country, but also internationally.

Dr Muoria further noted that the move by the Ministry was informed by various reports and surveys from UNESCO Bear II, SITVES and by the Kenya School of TVET (KSTVET) which revealed gaps in management capacity in the TVET institutions.

The Kenya School of TVET Director General, Dr Edwin Tarno, pointed out that the project which started in June last year, targeted 3,115 TVET managers across the country and has so far trained about 2,000 administrators.

"We started with training of Principals across all TVET institutions, we came to their Deputies, we have come now to Estate Officers and Income Generating Officers, in the next one month, we will be going to train the Heads of Departments of all TVET colleges in Kenya," said Dr Tarno.

Dr Tarno hinted on implementation of the continuous professional development, which is one of the requirements of the TVET Act of 2013, which requires one to go for training at least once in every three years.

"In the Kenya School of TVET, it is its business to run courses for every staff, including the security officers, cleaners and the kitchen staff, everyone should be able to take a course in TVET, to get some latest technologies. When you improve on technology, you improve on quality of products, hence better health and economy," he added.

The training of the TVET managers on income generating activities is geared towards fostering quality leadership of the institutions, enhancing adherence to government regulations in public financial management, proper supply chains management services, effective and efficient facilities management and inventory control, proper project planning, management, monitoring and evaluation.

# This is our plan for the TVET sector



**T**he appointment of **Dr. Esther Thaara Muoria**, as the Principal Secretary State Department of Technical and Vocational Education and Training (TVET), in the Ministry of Education December last year, ushered in a sigh of optimism for the TVET sector, which is pegged to play a critical role in job creation for the youth by the new government.

The TVET Eye Magazine sat down with the former registrar at the Jomo Kenyatta University of Science and Technology, to pick her mind on pertinent issues in the TVET sector and seek out solutions to some of the challenges facing TVET pathway in the country.

During the interview, the PS was erudite in her responses to pressing issues facing the sector and oozed confidence that the new team at the Ministry of Education and the government of President William Ruto is ready for the tough task ahead. Coming from the academia, Dr. Muoria for instance believes that the reforms being

implemented at TVET sector are not only vital but timely as the government seeks to narrow the unemployment gap among the youth. She observed that TVET is a great gateway in reverting the current state of things and will be key in converting Kenya from a job-seeking country to a job creating space.

She said that the government has already used in excess of 10 Billion in equipping and enhancing the infrastructure in TVET institutions, the negative perception that has for a long time been attached with TVET institutions is slowly ebbing, thanks to the big strides that the government has made in rebranding the sector and positioning it as a pathway that responds to the industry needs and skilling for self-employment.

In her submission, the PS said that for the TVET sector to thrive, TVET institutions must be supplied with adequate human resource, infrastructure and capitation. She reiterates that the government has already approved hiring of 1,300 trainers who will

be placed in different TVET institutions across the country before the end of this financial year.

The government in collaboration with development partners such as the World bank will also establish Centres of Excellence, a promise that was captured in the Kenya Kwanza government's Manifesto. This development has been preceded by a move to rebrand Kenya Technical Trainers College (KTTC) to Kenya school of TVET (KSTVET) so as to provide quality and adequate retooling of trainers.

The PS believes that the establishment of state agencies such as TVET Authority and Kenya National Qualification Authority (KNQA) will promote relevance and quality in the TVET education, even as the government plans to implement the Recognition of Prior Learning (RPL) in TVET. The RPL will provide equal chances to the old generation who might have been skilled informally, so as to benefit from government jobs.



In the same vein, Dr. Muoria said that for the first time, her department will introduce a database that will contain names and addresses of TVET based Industry players so as to be able to place and trace trainees before, during and after industrial training. She believes that this industrial hub will come in handy as the government seeks to replace the Competency Based Education and Training (CBET) with Competency Based Education and Skilling (CBES) where 70% will be on-job training whereas 30% will be theoretical.

She acknowledges that the funding and capitation of TVET students has not been adequate in respect to the increased enrolment of students. However, she noted that the ministry of Education has put in measures to accommodate as many students as possible to TVET and cushion them from hard economic times. She commended the Higher Education Loans Board (HELB) for initiating a TVET kitty- a loan product tailored for students in TVET institutions. She noted such funds have helped to sustain students and put TVET institutions in a level playing ground with their counterparts-universities.

Dr. Esther Muoria opined that as the TVET sector gets into a critical stage of evolution, she is the right person to sail it through. She affirmed that the policies the government has tailored will come to fruition sooner than later.

However, how has the two or so months at the helm of the State department for TVET been and how does the TVET horizon look like? What does the Kenya Kwanza government intend to do to turn things around and spur enrolment?

Read the full excerpt of the interview below.

***Having been in the State Department for Technical and Vocation Education and Training in the last two or so months, what is your view on the current status of TVET in the country?***

My general view on the TVET sector is that this is a critical sector that can take this country to the next level of development. The government aims at improving access, relevance and quality of the TVET programmes and has already incurred approximately Ksh10.6 billion in expanding

the sector. The government also aims at establishing a national polytechnic in each county for improvement of that access so that its vibrant enough for everybody that wants to acquire relevant skills. Currently we have 218 operational TVET institutions i.e. 1 Kenya School of TVET, 11 National Polytechnics, 7 Institutes of Technology, 4 Special Needs Institutions and 195 Technical and Vocational Centres (TVCs) and many more Vocational Training Centre, which are under the County governments.

I'm glad to inform Kenyans that the overall enrolment has continued to grow. Currently the institutions are operating about 356, 000 students; 20 per cent are in Business related courses while 80 per cent are in technical courses.

We have in place requisite infrastructure for all that and we have established bodies that will help us run this sector. For instance, there is TVET Authority, whose main function is to regulate the TVET Sector by developing standards and assuring quality in the TVET space. We also have the Kenya National qualification authority (KNQA) that is charged with the responsibility developing and regulating the Kenya National Qualification Framework. The framework defines what constitutes qualification for each KNQF level. We are also looking at refurbishing TVET CDACC which is our curriculum assessment and certification council.

We are also working closely with the industry in the development and review of CBET Curricular to **Competency Based Skilling** in such a manner that trainees undergo a 70% industrial training and 30 % coursework. This will make TVET

graduates much more skilled for local and global labour markets.

***The new government came into office with a wide range of programmes to improve the sector. What are some of the plans the government is putting in place to meet the development aspirations of the country?***

The Ministry of Education, and the government in general is determined to working with industry players to collaborate in training. Currently we were doing 50-50 per cent where 50 of the time the trainees are in class and 50 in the industry. However, the government is looking at up scaling this 70 per cent in the industry and 30 per cent of course work. This way will ensure that the trainees are well skilled.

The government has also approved the hiring of 1,300 trainers, this is already in process and has allocated funds for this in the 2023/2024 annual budget so that we try and bridge the trainer gap.

Further, the Government approved the Recognition of Prior Learning (RPL) to address the age old discrimination of those who gain skills through the informal sector popularly known as Jua kali. Under the Recognition of Prior Learning (RPL), skills acquired through the informal training or acquired in the process of working, will be recognized through assessment and certification. Therefore, people with skills acquired informally shall have an equal chance in bidding for government work with their counterparts trained through the formal sector

***Funding has always been a problem facing the TVET sector, especially on infra-***



PS. TVET DR. Esther Muoria inspecting EASTRIP project at The Kisumu National Polytechnic



**structure, provision of equipment, TVET trainee capitation. What is the government doing to address those specific challenges?**

As you are aware, H.E. President William Ruto has put in place the Presidential Working Party on Education Reforms (PWPER) and one of the task force Terms of Reference is to address the issue of education, training and funding. We are certain that the task force shall come up with recommendations to make education and training affordable and sustainable.

Currently, the government is addressing funding of Infrastructure and Equipping of TVET institutions. The Government is collaborating with development partners such as World Bank, African Development Bank, KfW/GiZ, the People's Republic of China, the Republic of South Korea among others in funding and equipping these TVET institutions. Through such initiatives the Government has managed to establish new TVET Institutions, rehabilitate existing TVET Institutions, equip these facilities, carry out capacity building of the TVET trainers, and develop curricular among other interventions.

**On the TVET trainees' capitation,** the government intends to continue disbursing capitation to TVET trainees just like capitation disbursed to other levels of the education spectrum. However, the Government is looking for ways and means to complement the disbursement of capitation. My State department in collaboration with the World Bank is developing a TVET Financing Policy, which shall, among other interventions address the issue of supporting the production units in TVET institutions. The income from the production units shall be used to subsidize the cost of training in TVET. In addition, the Government will engage the industry to explore ways in which the industry can support the cost of training.

**On the employment of trainers,** the Public Service Commission (PSC) has already approved the recruitment of 1,300 trainers to address the shortage of trainers in the TVET Institutions, in addition the PWPER are cognizant of the shortage and we believe that the task force shall make a recommendation for approval for recruitment of more staff to bridge the trainers'

shortage. We will also re-tool and reskill the trainers so that they can be pragmatically be in the area of skills as well as re-skilling and retooling those already in the field.

**The other agenda in the Kenya Kwanza manifesto is the creation of Centres of Excellence. Few have already been established but what is the grand plan to ensure the institutions are spread across the country?**

The establishment of Centres of Excellence (CoE) in TVET sector is a process. It shall start with the supply of equipment to TVET Institutions, establishing equipping gaps, establishing the dominant economic activity in the institution's host community, closing the equipping gap, capacity building the personnel to run these institutions, establishing industrial advisory committee for the CoE, establishing research and innovation hubs in the centres, establishing Intellectual property Rights desks in the CoE and establishing structures for commercialization of the

**clusion of TVET trainees in government projects such as the affordable housing. Is there a framework and roadmap on how the government is going to implement this program?**

At the Moment, TVET institutions are partners in the establishment of social affordable housing. The Kabete National Polytechnic and PC Kinyanjui TTI are involved in the Kibira-Soweto social affordable housing, whereby, in collaboration with the Jua Kali sector, the two institutions design, fabricate and supply doors and windows to the project. I was also personally present when we launched the Ruiru affordable housing project and the president absolutely stated that the TVET institutions around Ruiru and Thika must be involved not only in fabricating but also in masonry works. In addition, the two institutions shall recognize, assess and certify workers in the sites for the skills learnt informally at the sites (PLR). This collaboration and model shall be replicated across the country as it derives its mandate from a Memorandum of Understanding Signed between the State Departments for Public



**Tuition block at Meru National Polytechnic**

research and innovations outputs.

The government is working with partners like the World Bank and others to make this a reality. We have actually written four proposals for Centres of excellence and we hope the process will start soon.

**The other thing that the President promised during the campaigns was the in-**

Works and TVET. In the long run, it will eventually be escalated into a government policy through the development and adoption of a policy framework on incorporating training in government Projects.

**Another issue is about the CBET curriculum which just came to force two or so years ago but a few institutions have already embraced the curriculum. What is the Ministry doing to ensure all the TVET**

### *institutions have embraced the curriculum?*

The Ministry has put in place all the structures required to ensure that CBET Curriculum is rolled out in all TVET Institutions. This endeavor entails involving various TVET institutions for the gradual roll-out. The following are key in the roll-out plan:

The government established the Kenya School of TVET with the main function of re-tooling TVET trainers and training fresh TVET trainers in the implementation of the CBET Curriculum. but also the CBES Curriculum where like I have said, we want to break down the education and training to skilling. There is a conversation going on between the department and Dr. Tarno (Principal, KSTVET) where we are going to have campuses across the country so that during the holidays the trainers can go to local branches of the Kenya school of TVET and this will be cheaper and doable.

The Government has established 11 National Polytechnics

whose mandates includes among other developing, training, assessing and certifying CBET programmes. Actually some of them like Kisii and Nyeri have rolled them out. This is a supplementary role to the functions carried out by TVET-CDACC. The government has also supplied modern equipment to TVET institutions and, this process is ongoing to ensure that all TVET institutions are equipped with modern training equipment to support CBET training.

Furthermore, the Technical, Vocational Education and Training Authority (TVE-TA) is fully operational with the mandate of quality assurance for the CBET programmes. They are able to audit the new curriculum that we are calling the

Competency Based Skilling so that by the time trainees are graduating, they are well skilled. Also the Kenya National Qualifications Authority (KNQA), which is fully operational, is ready regulate the KNQF and promote the Credit Accumulation and Transfer System (CATS) for the CBET programmes.

For all these to happen, there should be harmony in the ministry amongst different actors, that is, state agencies, stakeholder and even development partners. As a ministry what are you going to do to create the synergy, first in the department of TVET and then key stakeholders and development partners so that everybody is work-

ing towards the same goal?

The Ministry has formed the Joint Subsector working group to bring together the Ministry, Development partners and other stake holders. Another important platform is the Sector Skills Advisory Committees, which bring together the Ministry and the Industry in issues of curriculum development, training, assessment, certification and provision of solutions to industrial problems.

Going forward, the Ministry will strengthen these platforms to make them more effective and efficient in the performance of their functions. The Ministry plans to explore for ways to strengthen the

coordination of the functions of State actors, especially the State corporations by creating a platform where all the state corporations in the Ministry shall converge with focused synergy.

I have already had this talk with Dr. Kipkirui Langat of TVET Authority, he said that this should have happened as soon as yesterday so that we can be working as a collaboration. Very soon we will be having a meeting with KATTI so that we can discuss this curriculum change and Dr. Kipkirui Langat will be there to give a way forward on changes to the curriculum. I have also said that we want the KNQA to come in. We will sit

down and discuss how we are going to work together and see how we can create very good synergy so that we can be able to produce these skilled people as a team.

***That's great! But what strategy is the ministry applying to improve that collaboration between the industry and TVET institutions?***

The Ministry in collaboration with the World Bank has plans to develop the industrial linkage policy framework. This will define the actors, their functions, rights, responsibilities and rules of engagements. The Ministry shall also appeal to the key decision makers in the Government to assist in encouraging the industry to take a more active role in TVET train-



*PS. TVET DR. Esther Muoria inspecting EASTRIP project at Nyandarua National Polytechnic during International Research Conference*

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ing.

I have also challenged the technical department to establish a database of industry where, for example if we have a skill like plumbing, which are the industries in plumbing areas so that if we are training a plumber in Garissa, the plumber has an absolute place where he will be placed in industry even if it's in Nairobi. How are we going to ensure the comfort and continuity of this student whose is coming from the ASAL area; We are working with partners like the Swiss, Germans and the Canadian. Those ones are interested in providing this duality with industry where they will take care of the trainees.

We are establishing a pool of industry as a department and we are going to scale that up by coming up with a Memorandum of Understanding with them so that it's not about guesswork where this trainee will be attached during training but a guarantee.

***The last question is about rebranding of the TVET sector, it's a very big challenge. There is a negative perception among the youth, the parents and the general public that TVET sector is for failures, those not qualified to be placed at universities. As a ministry, what are some of the strategies in place to rebrand the TVET sector?***

Over the years, TVET institutions had been associated with those that did not score high grades for university admissions. Therefore, everybody felt that going to TVET was a lower choice. We want to turn this completely and ensure everybody, both the youth and parents understand that going to a TVET is a better choice. Why? Because going to TVET will ensure that by the time they graduate they have what they need. This scenario of negative attitude and perception among the general public need to change as it is totally misplaced. There is need to understand

that no student is regarded a failure by government.

The Ministry in collaboration with some stake holders is developing a communication and advocacy strategy to address negative perception and attitude.

I am happy to note that enrollment in TVET has been on a steady rise in the recent past. The increasing number of youth who continuously opts to join TVET rather than join University despite achieving the mark required to join the University.

In the year 2022 KCSE examination, some 16,310 candidates who qualified to join universities did not submit any university course applications while 5,278 opted for diploma programmes at various TVET institutions. This remarkable trend has been witnessed in the country for the last five years





# DG Meets Serbian Ambassador



TVETA DG Dr Kipkirui Langat hold meeting with Serbian Ambassador to Kenya

**T**VET Authority Director General Dr Kipkirui Langat met the Serbian Ambassador to Kenya Mr Dragan Zupanjevac at his residence in Nairobi and discussed how Kenyan skilled workers can access training and employment in the Eastern Europe country.

During the meeting, the ambassador said that there is a deficiency of the skilled and non-skilled workforce in his country in a number of sectors, including agriculture and construction that can be bridged by technical and vocational graduates from TVET institutions in Kenya.

He noted that his country is looking forward to recruiting, training and offering employment to Kenyan graduates with vocational skills in areas like plumbing,

welding, driving, masonry, and workers in the agricultural sectors, among others.

“Kenya and Serbia share similarities in culture, and food and we have had a long history of collaboration between the two countries. That is why I am focused on having Kenyan craftsmen to be trained and get employment opportunities in Serbia because we currently have a labour deficit of skilled and non-skilled labour,” the Ambassador said.

The Ambassador also said his government is looking forward to building the capacity of graduates from vocational institutions and establish certification centres that prepare, assess and certify TVET graduates to work in the international market.

Dr Langat welcomed the Ambassador’s

mission and offered that TVETA will come up with a proposal on how the Kenyan skilled workforce can be trained and later access employment opportunities and create synergies amongst other agencies in the government to actualize the plan.

He added that the program will afford Kenyan graduates from TVET institutions decent jobs in line with the government’s agenda of creating employment opportunities for its trained workforce.

“As a regulator and coordinator of the TVET sector, TVETA will work on a framework proposal for this noble scheme and also bring on board the Ministries of Education, Foreign Affairs, Labour and other government agencies like NITA, NEA, NYS, and others to that we can work together in this program,” Dr Langat said.

# Former Education Cabinet Secretary George Magoha laid to rest



**O**n 11th February 2023, Kenyans bade farewell to Former Education Cabinet Secretary Prof. George Magoha at his home in Umiru Nyamininia, Yala, in Siaya County.

Prof. Magoha was a transformational leader, illustrious scholar, dedicated public servant who left an indelible mark on our country's education system.

During his tenure as Cabinet Secretary for Education, Prof Magoha was instrumental in the growth and revitalization of the TVET sector. He had a soft spot for the youths and worked tirelessly to ensure they access quality training and in a conducive environment. He envisaged a world where the youth are creators and not job seekers, hence his steadfast belief in TVET as a game changer.

Professor Magoha stood tall and became a great ambassador and unparalleled campaigner for TVET. His enormous contribution to the establishment and equipping TVET institutions across the country will forever remain like a printed page in our minds.

Days after his burial, it's imperative that we emulate Professor's commitment to high standards and uncompromising integrity in the public service.

TVET Authority will forever be grateful to Professor Magoha for his seamless support that allowed us regulate and coordinate training in the country through licensing, registration and accreditation of programs, institutions and trainers.

We will remember him for his incredible intellect, wit, and ability to inspire and challenge us to do our best. The Board, the Management and the Staff at TVET Authority wishes his family fortitude during this time of grief and pray that God will grant Professor Magoha a peaceful rest in eternity. His legacy lives on.

Eternal rest grant unto him, O Lord, and let perpetual light shine upon him. May his soul, and the souls of all the faithful departed, through the mercy of God rest in peace, Amen.



# TVETA and stakeholders approve draft Standards and Guidelines for Disability Inclusion in TVET



TVETA DG Dr. Kipkirui Langat (Seated mid) Joined participants during the validation of draft standards and guidelines

**S**takeholders have given their input and validated the draft standards and guidelines for disability inclusion in TVET during a virtual sensitization exercise carried out by TVET Authority Standards Development department on March 1st 2023.

The drafting of the standards was done between 19th-23rd December 2022 by a technical team comprising participants from trainers from the National Special Needs Education TVET institution, Kenya Institute of Special Education, Special Needs Education Experts and TVETA staff.

During the one-week workshop, the team drafted a standard and guidelines for disability inclusion in TVET institutions, which will now be escalated for strengthening and engagement with key stakeholders for further input and technical support.

Following the development of the draft standard, a key stakeholders meeting to validate the standard and gather input was held in Naivasha on 16th January, 2023. Thereafter, the technical team collated the input in preparation for a virtual validation meeting which was held in March. Persons with disabilities represent a

marginalized group in skills development and the labour market. They are far more likely than persons without disabilities to be unemployed, underemployed or economically inactive. Where they have participated in vocational training, it is often in segregated settings where courses are frequently not linked to labour market requirements or at a standard lower than that required by employers.

Development of this TVET Standard was necessitated by the need to establish requirements and guidelines for the inclusion of Persons with Disability in TVET Institutions. This is expected to greatly improve the quality of training services for persons with disabilities in the TVET sector. It is envisaged that through standardization, service delivery disparities that are encountered when services are rendered to persons with disabilities in the TVET sector will be addressed.

This Standard, therefore, seeks to provide requirements and guidelines that will enable TVET institutions to establish minimum benchmarks that will allow them to efficiently accommodate trainees with different disabilities in their programmes. In addition, This Standard address management, acces-

sibility, admission, curriculum implementation and training, learning and training resources, communication, advocacy, safety, trainees support, industrial attachment and placement, research and innovation and data management.

TVETA Director Standard Development, Compliance and Enforcement Josephine Kasera thanked the sponsor of the workshop and participants for accomplishing the exercise on time.

"I am very grateful to Skills for Prosperity-Kenya Programme for financial support in developing the Standard. I also extend my gratitude to all the invited participants from TVET institutions for trainees with disabilities, Kenya Institute for Special Education (KISE), consultants in Special Needs Education and TVET Authority staff," Madam Kasera said.

"TVETA, in collaboration with partners, is committed to ensuring access, equity, quality, and relevance in training, including training for persons with disabilities. So far, there are no standards in place to guide the TVET sector, hence the need for standards to ensure that trainees with disabilities get an opportunity for quality training for gainful employment in the world of work."

After the validation from stakeholders, TVETA's Standards Development department will collate the inputs and improve the standard before it is tabled before TVETA's Board of Directors for approval.

Once the Board approves, the Standard and guidelines will be sent Kenya Bureau of Standards for conversion to a National Standard. There after they will be submitted to the Cabinet Secretary for Education for onward submission to Government Printers for gazettelement. The standard will then become a regulatory standard that shall be complied by all training providers.





CS. for Mining Salim Myurya during the ground breaking ceremony of the regional Maritime Institute

## State begins construction of KSh. 1.2 Billion regional maritime institute

By Kenya News Agency

**T**he government has begun the construction of a KSh1.2 billion regional maritime transport and port logistics institute in Kwale County.

The ultra-modern training facility will be a regional centre of excellence for the East African region.

The groundbreaking ceremony of the regional flagship project was held in December last year at Chitsakamatsa area of Matuga Sub County was led by Cabinet Secretary (CS) for Mining, Blue Economy and Maritime Affairs Salim Mvurya.

The ceremony for the commencement of construction works was also attended by the Principal Secretary for State De-

partment for Technical and Vocational Education Training (TVET) Dr Esther Muoria, Kwale Governor Fatuma Achani, Senator Issa Boy, Matuga MP Kassim Tandaza, area County Commissioner (CC) Gideon Oyagi and Kenya Coast National Polytechnic Chief Principal Anne Mbogo.

The institute that seeks to train a new generation of mariners is part of a World Bank project under the East Africa skills for transformation and regional integration project.

CS Mvurya said the government will promote sustainable investments in the blue resources and unlock the potential of the oceans frontier to contribute to economic growth.

He said once complete, the new facility is expected to equip trainees with relevant knowledge and skills in port logistics and marine transport and 'will cater for the country's maritime interest and place it in the category of a maritime powerhouse'.

Mvurya said the government is alive to the fact that the Indian Ocean presents an abundance of untapped opportunities for sustainable economic growth.

He said the regional training centre of excellence is part of an effort to spur the sustainable exploitation of the maritime resources which has remained unexploited for decades for economic growth.

The project dubbed 'East African Maritime Institute' sitting on a 40-acre piece

of land will be under the purview of the Mombasa based Kenya Coast National Polytechnic.

The CS said the regional maritime institute will be dedicated to the training of professionals in the maritime industry in such fields as shipbuilding and repairs and would be a 'game-changer for the maritime sector'.

CS Mvurya said the first phase of the project co-funded by the Government of Kenya and the World Bank will gobble up Sh.806 million terming the investment a huge vote of confidence in the blue economy sector.

He revealed that the project is being implemented in partnership with the European Union (EU) through the Sh.3.5 billion 'Go Blue' initiative, which supports projects in the coastal counties of Mombasa, Kwale, Kilifi and Lamu.

The Go Blue project aims to harness important coastal and marine resources to achieve a sustainable blue economy and bring jobs to over 3,000 youth.

Mvurya said the blue economy is a conduit to the local economic take-off in the coastal counties.

Mvurya said the blue economy also known as the sustainable ocean-based economy is an emerging global issue which refers to sustainable exploitation of water resources describing it as the 'next great economic frontier'.

The blue economy sector encompasses fisheries, maritime biotechnology, aquaculture, tourism and marine transport and logistics.

"The first phase comprising tuition blocks and administration blocks will take the next 18 months to complete," he said, adding that it will have state-of-the-art facilities for students pursuing the global marine transportation industry.

He said the second phase of the institute which aims at developing competent graduates for the maritime sector will be launched immediately the first phase is completed by 2024 and asked the contractor Symbion International Architects to work round the clock to deliver the

project within the given timeframe and in accordance with 'our specifications and engineering standards'.

"Once the facility is up and running it will play an active role in the promotion of safe and secure waters in the region and also engaging diverse stakeholder groups in the blue economy trajectory," said Mvurya.

CS Mvurya said the centre of excellence will offer world class maritime training on the blue economy to students drawn from Kenya, Tanzania, Uganda, Burundi, Rwanda, Ethiopia, South Sudan and the Democratic Republic of Congo (DRC).

He said Kenya is positioning itself to be-

**"The first phase comprising tuition blocks and administration blocks will take the next 18 months to complete,"**



come one of the leading maritime and logistics centres in Africa and that investments in the blue economy sector will spur job creation.

"What we are witnessing is a significant investment in the maritime industry and will in the long run enhance student and professional mariner experiential learning," he said adding that the new facility seeks to provide comprehensive marine training programs for the youth and professionals in the sector using modern facilities.

The minister said the government is now turning its focus on maritime matters as the next frontier of economic growth and underscored the need for the youth to explore career opportunities at sea.

He said the maritime and blue economy sector offers a wide range of opportunities such as imports, exports, on board ships and institutions that interact with the blue economy sector.

CS Mvurya noted that world trade is heavily dependent on sea transportation and underscored the need to equip the youth with maritime skills. The main transport mode for global trade is ocean shipping, noting that around 90 percent of traded goods are carried over the waves.

"Maritime transport forms part of a whole cluster of economic activities that creates economic value addition and that is why the government is keen on developing this crucial sector for sustainable economic growth," he said.

He said the centre will collaborate effectively with key stakeholders to ensure that the training offered were aligned with the needs of the industry and undertake continuous auditing of its programs to meet the changing times.

Industry stakeholders estimate that the blue economy, if properly implemented and harnessed, has the potential to create over 52,000 jobs in the next ten years besides having the capacity to inject Sh.470 billion into the economy.

The government is making efforts to unlock the potential of the blue economy offered by oceanic resources and urged the private sector to invest in the exploration of seabed resources.



Deputy Director TVET John Tuwei, during ground breaking ceremony for a workshop

# TVET students to start assembling vehicle body parts

By Kenya News Agency

**S**tudents from the Thika Institute of Science and Technology will now start assembling vehicle body parts, exposing them to skills to drive the automotive industry locally.

Through a collaborative effort between the Kenyan and German governments, the students will study auto-body building courses to become technically innovative in vehicle assembly.

Other courses that have been introduced through the programme in selected Tvets include Industrial Mechatronics, Automotive Mechatronics, and Auto-body building and welding and will see students trained on vehicle engine assembly.

Once they complete the Diploma course, the students will acquire a Kenyan and German certificate.

John Tuwei, Deputy Director TVET said the courses will expose the youth to the manufacturing sector and enable them drive the industrial agenda necessary in

growing economies.

Speaking during a groundbreaking ceremony for a workshop that will be offering the courses at the institution yesterday, Tuwei said students will not only become innovative but also become entrepreneurs.

“Our students will become well versed on Technical and Entrepreneurship competencies relevant to the labour market locally and globally. They will also drive the industrial and manufacturing agenda,” he said.

The representative of Germany KFW Bank, one of the financial partners of the project Benjamin Graedler said 350 students will be trained in the first phase.

He called on the government to equip the seven Tvet centres adding that they hope to increase the number of the Tvets offering the courses in the second phases next year.

“Tvets will remain the main path in making young people actively become the workforce. This will drive the country in

the manufacturing sector and enable the youth to become technically skilled in driving the agenda,” said Graedler.

Thika MP Alice Ng’ang’a said the new facility will enable local youth to drive the agenda of making the town the industrial town that it was years ago.

She termed it a milestone saying equipping the youth with technical skills will end unemployment and increase entrepreneurship.

She called on youth to consider enrolling with the Tvet and become part of the manufacturing agenda of the constituency.

Thika town has an advantage of having a branch of the Kenya Vehicle Manufacturers company (KVM) that assembles vehicles, a boost in offering the youth skills in vehicle assembly.

“Being the host to KVM and now the TTI auto-body making workshops, our youths will have the technical skills needed for vehicle assembly and in the industrial sector,” said the MP.





Thika MP Alice Ng'ang'a handing over laptops

## MP starts programme to equip TVETs with laptops, internet

By Kenya News Agency

**T**hika Constituency MP Alice Ng'ang'a has announced plans to equip Technical and Vocational Training Institutions in her constituency with laptops and internet connectivity to boost Information Communication and Technology (ICT) skills for learners.

The MP said most of the TVET institutions in the area have been neglected and lack the necessary infrastructure and equipment making it difficult to attract students.

Speaking after issuing 19 laptops to the Christian Industrial Training College (CITC), a Thika based TVET institution, the MP said the programme will enable learners to gain relevant ICT skills to enable them to become more marketable.

The legislator said she will partner with other government institutions and well-wishers to actualize the programme, noting that in this age of technological revolution, ICT is the future and thus learners must endeavor to constantly explore the

digital space to remain relevant.

She called on the students to take advantage of the digital revolution that provides numerous employment opportunities, as well as become innovative and be able to solve the challenges that they face through the use of technology.

Ng'ang'a said since most of the government services have been digitized, all learners need to be tech-savvy in order to access them. "Most of the TVET institutions in this area have been neglected. They need to be equipped with computers and laptops to attract more learners and also make the learners relevant in the market," she said.

"The world is going digital and thus we should train our young people on technical courses, make them embrace ICT skills by incorporating technology in their courses," Ng'ang'a said.

She at the same time called on universities and colleges to equip their institutions with ICT equipment to better equip their students to become competitive.

**The MP said most of the TVET institutions in the area have been neglected and lack the necessary infrastructure and equipment making it difficult to attract students.**

# Curtain Closes for BEAR II Project in Eastern Africa, as countries celebrate achievements



Participants during BEAR II closing ceremony at a Nairobi Hotel

**T**he implementation of Better Education for African Rise (BEAR II Project) came to a close in November last year after the five East African countries of Kenya, Tanzania, Uganda, Ethiopia and Madagascar submitted their evaluation reports and discusses on the lessons learnt during the six-year stint.

BEAR II Project, which rolled out in 2017, was a joint project of UNESCO and the Republic of Korea, designed to benefit the TVET Sector in these five countries.

This was the second edition of the project, since its inception back in 2011, when the first edition was rolled out in the SADC countries. Project implementation covered the period 2017-2021 with a one-year extension to end on December 31, 2022. The main objective of the project was to improve the relevance, quality and perception of their Technical and Vocational Educa-

tion and Training (TVET) systems in the benefiting countries.

The BEAR II project supported each beneficiary country in transforming their TVET systems in a perspective of sustainable development through specific sectoral interventions and capacity-building activities in areas such as the Agro-processing sector (Ethiopia); Environmental sector (Kenya); Textiles industry (Madagascar); Agro-processing and Post-harvest management (Uganda); Agribusiness and creative industries (Tanzania).

During the project closing ceremony held in Nairobi on 15th November 2022, Kenya's Education Cabinet Secretary Mr. Ezekiel Machogu, who was represented by Deputy Director State Department for TVET Joseph Kanyi, said that the Ministry is investing heavily in digitalization, appealing for more partnerships going into the future.

He said that the government has made long strides through the recognition of Prior Learning as a way of embracing the youth who are skilled but lack formal training, to increase their employability by getting access to certification.

The Director General TVET Authority Kenya Dr. Kipkirui Langat noted that BEAR II Project achieved a lot in the country and has provided lessons that will guide future projects.

"The project supported the development of policies to guide the TVET Sub-Sector in Kenya, like the Open Distance and Electronic Learning (ODEL) policy, Continuous Professional Development (CPD) policy framework, Career Guidance and Counselling Framework, and Quality Assurance Manuals. The project also established the National Skills Getaway for Kenya, a platform that will be useful in the sharing of necessary in-



formation among youth and other TVET stakeholders,” said Dr. Langat.”

Dr Langat called for further discussions with partners, UNESCO and the Republic of South Korea to establish more collaborative avenues of ensuring that the impact of the project is sustainable and identify new areas of further collaboration.

In Kenya the project reviewed curricula as well as established occupational standards through the private sector framework. At least 400 TVET trainers and managers were trained on 21st-century skills based on the modules developed. This included also, capacity building for trainers on the use of Learning Management Systems.

Professor Hubert Gizjen, the Regional Director UNESCO Regional Office for Eastern Africa pointed out that the achievements of the BEAR II project will be a stepping stone going into the future, as UNESCO plans to roll out a strategic BEAR III in Central and Western Countries.

“The project has made incredible strides in strengthening TVET systems in the region and consequently promoting access to decent jobs by the youth. We have focused

on skills because they are vital in poverty alleviation and job creation for the youth and also in the achievement of SDGs. TVET has the potential to drive economic growth and wealth for all,” he said.

Prof Hubert noted the project has provided a good breeding site for the improved image of TVET and curriculum development, giving an example of the integration of Greening into the TVET system.

Madagascar Minister for Technical Education and Vocational Training Madam Gabriela Rahantarinima acknowledged the success of the project since it was founded on the national needs of the five benefiting countries of the BEAR II project.

“The Project was designed to equip young people with skills which are in aspiration with their respective countries’ economic needs and also have access to the job market. I urge all of us to pick the positive elements from the evaluation report and continue implementing them,” she noted. In Ethiopia, BEAR II project has achieved standardization of curricular and module development with implications for improving the quality of training and learning.

Uganda reported that Covid-19 was a major setback in the implementation of the project. They recommended proper environmental sustainability strategies to be deliberately embedded in the project and resources for the promotion of capacity building to ensure a peaceful and clean TVET.

Tanzania Deadatus Banzi, representing Tanzania Technical and Vocational Education and Training Authority (TAVETA) affirmed that the BEAR II project in Tanzania was a success, after achieving a 100% engagement of key TVET leaders and decision-makers. He added that the project was implemented within the government’s existing structures.

During the closing forum, the delegates were taken through the Career Guidance Framework, which was developed under the BEAR II project. The objective was to raise awareness about the role and importance of effective career guidance to enable access to decent work, and careers and support growth efforts during the economic recovery, based on the example of BEAR II project. The event was used to share good practices and lessons learned on career guidance within the BEAR II countries.



Professor Hubert Gizjen, the Regional Director UNESCO Regional Office for Eastern Africa





# Know about top tech job roles in the gig economy

By Annanya Sarthak

**W**e live in a world where traditional 9-5 jobs are no longer the 'right' way to build your career. Remote working, flexible hours and work-life balance have become the norm - paving the way for the gig economy. Today, companies do not restrict hiring people who live in the same city as the workplace. Remote and contractual jobs have become highly prevalent, especially for tech roles.

Companies want to hire highly skilled people who have specific knowledge, skills, or experience for specific time-bound projects. This gives people the opportunity to work with various companies on projects of their choice, at their own pace. Due to rapid technological transformation leading to high demand for tech skills, freelancing opportunities, especially in the tech sector, are in abundance. The question is what are these roles that are in high demand in the gig economy. Here is a curated list of the top five tech roles in the gig economy.

**Full Stack Developers** are computer programmers who are proficient in both frontend and backend coding. Their primary responsibilities include designing user interactions on websites, developing servers and databases for website functionality, and coding for mobile platforms. Professionals need to stay updated on developments in web applications and constantly train themselves in new coding languages. Their wide-ranging knowledge allows them to be adaptable and agile, which are essential skills for working on software products.

**Skills needed:** Candidates should have knowledge in SQL and No-SQL, HTML/CSS, Git and GitHub; messaging middleware infrastructure services like Rabbit MQ, Kafka, and AWS Kinesis; backend languages like PHP, Python, Ruby, Java Web Architecture, HTTP and Rest, database storage, basic design skills and NPM along with a proficiency in JavaScript, the JavaScript object model, and ES6.

**Java Developers** have many great opportunities in the IT industry, from established roles to transformative and highly evolving ones. A Java Developer is a programmer who designs, develops, and manages Java-based applications and software. With most large organizations using Java to implement software systems and backend services, a Java developer is one of the most sought-after jobs today.

**Skills needed:** Candidates need skills such as in-depth knowledge of basics to a thorough understanding of the current developments. Experts in Java are also expected to know how the development process works and how to transition between the environments where the code runs. A well-rounded Java Developer has proficiency in Java full stack developer skills and Java backend developer skills.

**React Developer** - In this profile, you will design and develop high-quality software solutions for web applications and mobile apps using React. You will also im-

plement new features and maintain existing code using React and other standard tools in the React ecosystem, such as Node.js and Yarn.

**Skills needed:** Hands-on experience in ReactJS, familiarity with common programming tools such as Redux, IDEs, RESTful APIs, Git repositories, TypeScript, version control software; remote deployment tools, and a commitment to collaborative problem solving, sophisticated design, and quality product is important.

**Angular Developers** are responsible for developing and designing user interfac-

es using the AngularJS framework. You will be responsible for creating a top-level coding-base using Angular best practices. Your main duties will include creating modules and components, and coupling them together into a functional app. One of the main responsibilities is to work closely with web developers and backend engineers to create high-performing, responsive, and interactive web applications.

**Skills needed:** Proficiency in JavaScript, modern JavaScript, HTML, CSS, rendering data to the DOM using Angular. You should also have a thorough understanding of Angular and its core principles.

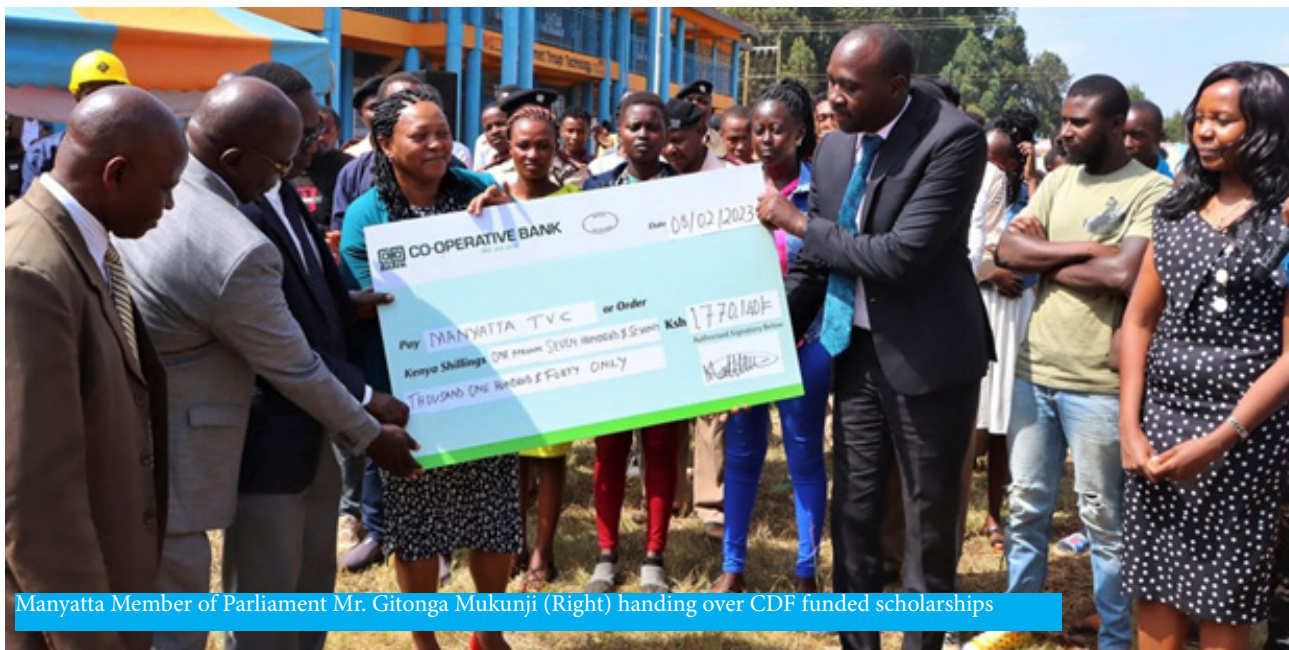
**Data Scientists** are responsible for organizing and presenting the results to the key stakeholders and investors in an easy-to-understand manner. They also build machine learning (ML) and artificial intelligence (AI) tools that automate certain processes within the company. **Skills needed:** Aspirants must have programming skills, quantitative aptitude, computational framework knowledge, data warehousing, communication skills, and hands-on expertise with multiple technologies, along with auditing skills and business acumen.

*(The author is co-founder and CEO, Aw-ign)*



A student learning digital skills at a Jitume lab





Manyatta Member of Parliament Mr. Gitonga Mukunji (Right) handing over CDF funded scholarships

# Legislator launches Sh1.7 million scholarship program for TVET courses

By Kenya News Agency

**M**anyatta Member of Parliament Mr. Gitonga Mukunji has launched a National Government-Constituency Development Fund (NG-CDF) funded scholarship programme for Technical and Vocational Education and Training (TVET) courses to equip school leavers with skills for self-employment.

The MP said in light of disappearing white-collar jobs, there was a need for a paradigm shift in exploring blue-collar jobs that involve greater degree of manual labor.

Speaking during the issuance of a cheque of Sh. 1.7 million for the first 67 cohorts at Manyatta Technical and Vocational College, Mukunji said technical education was one of the very few fields that assured sources of income to those who have gained proper technical skills.

He said the current job market in the country was in need of technical knowledge more than mainstream education that has for years been the in thing as many students saw themselves doing plum

jobs that required brainwork rather than skills and inherent talents.

“For instance, for one civil engineer in the construction industry, you need support personnel engaged in tasks such as masonry, carpentry, plumbing and electrical works,” he said.

He said as the country transitioned into upper middle-income status, more and more students were inclined towards technical education that was key in nurturing and promoting independent workers and entrepreneurs.

The legislator noted that there were massive projects being undertaken by the government in the county that offered numerous opportunities for those with technical knowhow in related fields.

“In this constituency alone as we speak, we are this year constructing two stadiums, close to 40 kilometers of tarmac roads and later will be launching an affordable housing project,” he noted.

He added, “all these projects will require a

huge workforce of our young people with technical knowhow to be absorbed.”

He said the scholarship programme will be running every year to ensure many more school leavers and dropouts benefit and position them to scoop such opportunities whenever they arise.

The MP at the same time said plans were underway to establish a computer laboratory in the institution with internet in order to introduce and expose the youth to the world of online jobs.

The college Principal David Ngari lauded the project, saying it will go a long way in increasing the enrollment and retention of students as they won't have to worry about how to raise fees.

“Our students come from the community around and some have had challenges of raising school fees forcing some to drop out, but this will be a thing of the past with this initiative,” he said.

ACK Diocese of Embu Education Secretary Dr. Jackson Ngari called on school leavers to take advantage of the opportunity to gain skills that will enable them to become their own bosses.



# Rotary Club Nairobi East Members Encouraged to Embrace and Support The TVET Sector



TVET Authority Assistant Director of Corporate Communication James Momanyi (centre with white shirt) poses with Rotary Club Nairobi East members

**T**TVET Authority Assistant Director of Corporate Communication James Momanyi encouraged members of Rotary Club Nairobi East to embrace the TVET sector and consider coming up with programmes that supports TVET trainees and institutions.

He noted that the government has undertaken major reforms in the TVET aimed at making the sector a driver for youth employment in the industry and entrepreneurship.

Mr. Momanyi was invited by the Club to share insights on the TVET sector and the underlying opportunities for the youth who intend to pursue training in TVET institutions.

The Assistant Director took the member through an overview of the TVET sector including the roles of the National and County Governments, an outline of the State Department for Vocational and Technical Training, the mandate of the SAGAs in the State Department, the TVET system in Kenya, funding of TVET institutions and trainees, the TVET progression pathway under the Kenya National Qualification Framework, the opportunities in the TVET sector, challenges facing the sector, the emerging elements in the sector like CBET, ODEL, PLAR, Dual/Cooperative Training and how Rotary Club can plug in and support TVET institutions and trainees from less privileged families undertak-

ing or wishing to pursue TVET programmes.

The members appreciated the information provided and challenged TVET Authority and other government agencies to strengthen their communication channels because most Kenyans are not aware of the reforms in the sector and the underlying opportunities.

Eng. Peter Mbui decried the low enrolment in TVET institutions and asked the government to come up with strategies to ensure that the over 500,000 KCSE candidates who don't qualify for university intake enroll and pursue TVET programmes.

Tito Tadeo who owns a steel and welding company and a member of the Club appreciated the introduction of PLAR in Kenya, noting that most of his welders have skills but do not have certificates.

“One of the challenge I face in my business is that sometimes it is difficult for me to bid for major contracts because, as a requirement during bidding, you need to attach the qualifications of some of the members of the technical staff. And most do not have certificates because they don't have formal training. Most welders train on the job and with time they become excellent in their work.”

He said he has never heard about PLAR and pointed out that he will henceforth enlist his employees for PLAR assessment and certification.

# GHANA

## Skills Gap Analysis find 75 Per Cent TVET Curricula Outdated

Seventy-five per cent of the curricula of technical and vocational education and training (TVET) institutions is outdated, a skills gap analysis between 2018 and 2022 has revealed.



The Director-General of the Commission of TVET (CTVET), Dr Fred Kyei Asamoah

**T**he analysis, which was matched with an audit of 10 economic sectors, showed that within the period, there was also an ineffective mode of teaching at the various TVET institutions, which adversely impacted on the productivity levels of graduates from those schools on the job market. The analysis was to address issues of skills mismatch between training institutions and industry.

### Addressing gaps

The Director-General of the Commission of TVET (CTVET), Dr Fred Kyei Asamoah said the gaps in the curriculum are being addressed under the Ghana Jobs and Skills Project, which is expected to develop 100 competency-based training (CBT) packages from level one (proficiency) to level five (higher national diploma) of the national TVET qualification framework.

“In all these, however, one of the biggest drawbacks in the provision of quality TVET is the poor state of training facilities and equipment and the lack of linkage to industry.

“Only a handful of formal TVET institutions and providers are considered well-equipped to provide training,” he revealed.

### Investment

The director-general said in response to those challenges, the government had invested “massively” in TVET over the last five years.

He listed the investments to include the upgrading and modernisation of all the erstwhile 34 National Vocational Training Institutes (NVTIs), the head office, together with 10 regional offices, five apprenticeship offices across the country and the Opportunities Industrialisation Centre at Bawaleshie in Accra.

Dr Asamoah said the upgrading involved the construction, rehabilitation and equipping of laboratories, workshops, additional classrooms, hostels and administrative offices with €123 million.

He said additionally, two new foundries and machining centres at the Council for Scientific and Industrial Research (CSIR) in Accra and the Kwame Nkrumah University of Science and Technology (KNUST), Kumasi were completed last year.

He further said construction work on five new district TVET centres of excellence was ongoing, with those at Anyinam in the Eastern Region and Pakyi No. 2 and Manso Abore, both in the Ashanti Region, nearing completion, while those at Assin Jakai in the Central Region and Akomadan in the Ashanti Region were at various stages of completion.



“The first phase of the construction of 32 state-of-the-art TVET institutions, costing \$158 million, commenced in nine regions last year. These campuses will have academic facilities, workshops, laboratories, hostels and staff accommodation and provide further access for training,” Dr Asamoah added.

#### **Critical time**

The CTNET Director-General explained that the survey was even more critical in a time of accelerated technological development when industries, globally, kept transforming, with TVET at the centre of providing the skills needed for them.

As part of the strategic plan to ensure the evenly spread of skills at the disposal of industries, he said, the government was

establishing sector-specific skills bodies in 22 identified economic sectors, with 12 of such bodies already inaugurated.

He said the analysis and audit findings had contributed to the work of the sector skills bodies to help with the generation and upgrading of standards within the CBT framework.

#### **Next strategic plan**

Touching on the next five years under the strategic plan, Dr Asamoah said the government was looking forward to launching the TVET transformation plan and developing a TVET Policy.

“We will be looking at the digitalisation of the TVET system, as well as the licensing

and professionalisation of TVET graduates.

“We are working at creating a sustainable TVET financing mechanism with the enhancement of the Ghana Skills Development Fund. Arguably, our biggest activity will be to oversee the implementation of the modified dual TVET based on increased industrial attachment,” he added.

He said as part of the regulatory mandate of the commission, there would be stronger monitoring mechanisms with tracer studies in TVET institutions, especially at the technical universities, stressing: “We are working towards bridging innovation and learning in TVET.”

*From Graphic online*

## **KIST Ready for National Polytechnic Upgrade**

**P**lans are underway to upgrade Kiambu Institute of Science and Technology (KIST) to a national polytechnic before end of the year. Speaking during the ground breaking ceremony of a new boarding facility and Industrial Mechatronics workshop at the institute, Education cabinet Secretary Ezekiel Machogu confirmed that plans are underway to upgrade the KIST to a national polytechnic.

“My first major assignment is to make sure that KIST becomes a national polytechnic before the year ends,” he said.

This initiative is part of a program that encompasses seven institutions in the country dubbed, Promotion of Youth Employment and Vocational Training in Kenya program that seeks to establish centers of excellence and contribute towards quality, relevant education and training.

According to the CS, the initiative will be extended to other parts of the country, which do not have access to TVET institutions, as well as other facilities which the government has pledged to establish over the next few years

“The workshops, classrooms and dormito-

ries to be constructed at the institution will contribute to increased access, inclusivity and equity for students from all over the country including those with special needs to meet the standards of a national polytechnic,” he said

The program which is funded by the Federal Republic of Germany has already received funding of about Sh4.1 billion for its phase two initiative, which will benefit many youths across the Country.

“Our assurance to our development partners is that, the government will ensure prudent utilization of all resources provided to establish the seven Centers of Excellence for dual technical, vocational education and training in selected course areas, with KIST being one them,” said Machogu. The CS further cited that the government has allocated Sh1.8 billion in the current financial year for construction and equipping of Technical Training Institutes and Vocational Training Centers, saying these are cardinal to the production of the critical human resource capacity for the economic transformation

“Further, the government has set aside Sh1.1 billion to increase access and im-

prove the quality of Technical and Vocational Education and Training programs, Sh527 million for Technical, Vocational Education Training and Entrepreneurship and Sh971 million for promotion of Youth Employment and Vocational Training,” the CS added.

KIST Principal Sammy Waititu lauded the government and the Germany Cooperation for the initiative, which was to be launched in 2020, but stalled due to financial and land hiccups.

“We have been looking forward to the launch of this project since 2020. We are happy it’s here now and we will be elevated to a national polytechnic. I am also aware that the German Government is supporting other initiative through Wings to Fly programme which targets both basic and tertiary learners, through which needy learners are reached and enabled to access education,” said the Principal.

**By Mentor hub**



Participants at the conference

## BILT Conference

**T**TVETA, UNESCO-UNEVOC BILT conference call for greening and digitalization in hospitality and tourism industry

TVET stakeholders called for greening and digitalization of the Hospitality and Tourism industry during the conclusion of Bridging Innovation and Learning in TVET (BILT) conference on 9th November 2022.

The 3-day international conference was a joint initiative of the German Federal Ministry of Education and Research, the German Federal Institute for Vocational Education and Training, and UNESCO-UNEVOC.

The conference, which was hosted by the Technical and Vocational Education and Training Authority (TVETA) together with African Union, deliberated on matters 'Going green and digital' in the wake of technological advancement.

Participants, who included keynote speakers, TVET trainers and managers, TVET experts and stakeholders from Ministries, National bodies, TVET providers, re-

search institutes, representatives of the private sector, and other stakeholders in the Hospitality and Tourism industry, tracked on the measures and milestones that have been achieved in greening and transformation of the Hospitality and Tourism Industry. They also brainstormed on the dynamics of technology in the sector, in view of the changing landscape in the skilling of the practitioners in the industry.

The guest of honor, Education Cabinet Secretary Ezekiel Machogu's speech was read by Director Technical Education, Tom Mulati. The CS said the concerns about climate change place pressure on TVET institutions to develop skills.

"The Kenya government has incorporated a unit on environmental sustainability in all the CBET programmes," he said.

Keynote speeches were made by senior officers from the Kenya Ministry of Education, BOMA International Hospitality College (BIHC) Director Mr. Abbas Gullet, Senior Youth Advisor, African Union Commission Mr. Nicholas Ouma, among other speakers.

TVETA was also represented by staff from across all departments.

TVET Authority Chair Prof. Florence Indede pointed out on the need for TVET providers offer climate change courses so as to sharpen skills in dealing with the effects.

"Kenya is currently battling a severe drought occasioned by climate change that has caused a lot of suffering to its populace. Climate change adoption calls for concerted efforts from all sectors," Prof. Indede said.

TVETA Director- General Dr. Kipkirui Langat called upon TVET stakeholders to yearn for excellence by keeping tabs with the evolving world of technology. Dr. Langat reiterated that TVET Authority is doing everything within its mandate to promote and oversee a seamless incorporation of technology and greening in TVET institutions across Kenya.

"TVET is a key supplier of the workforce. In this regard, I urge everyone in the TVET ecosystem to be at the forefront of championing greening and digitalization in the Hospitality and Tourism Industry," Said Dr.



Langat.

The primary objective of BILT is to support TVET stakeholders across Africa, Asia-Pacific and Europe to address current challenges in TVET systems arising from technological, environmental, social and workplace changes. The BILT project provides a global platform for innovation, knowledge exchange, and peer learning. It collects best practices as well as lessons learned to make them available to interested.

UNESCO regional Director Mr. Hubert Gijzen said that Africa needs to accelerate greening and digital transformation, saying UNESCO has developed two key drivers to supporting the mission. He said that there should be a bridging link between formal TVET players to bring green skills for green jobs to fruition.

Speaking during the event, National Assembly Education and Research committee chair Julius Melly decried the notion that students who go to TVET institutions are failures. Melly said the skills acquired in Technical and Vocational Education and Training (TVET) institutions are use-

ful even to graduates.

“Get rid of the attitude and make sure that those graduates need to go TVETs to acquire skills,” Melly said.

This conference has been the first on-site Bridging Event of the BILT project in Africa. It has encouraged participants to among other things discuss the perspective the BILT project will take on green and digital transition in the hospitality and tourism sector.

The goal is to define the scope and focus of the new BILT Expert Group on the dual transition to a green and digital economy and society that is to be composed after the event.

During conference, the delegates also made a case-study visit to Kibondeni College of Catering and Hospitality Management which is a project of Nurisha Trust (an offshoot of Kianda Foundation) committed to the education and welfare of women in Kenya.

The institution began in 1961 as an in-service catering training school. The college aims primarily at improving the standards of living of young women from low

income families equipping them with the knowledge, skills and attitudes to enable them to secure employment to meet their needs and those of their families and make them self-reliant. Throughout the courses, emphasis is laid on character training, spirit of service and the importance of professional work for the development of the person and the country.

During the visit to the institutions, students showcased different skills both in goods and service. This included garment making, housekeeping, laundry and hospitality management. The college is well endowed with a state of art facilities. Guests were wowed by the level competency and skills denoted by students, as the former got treated with a colorful dinner prepared by the college students.

The culmination of the short visit was a tree planting by TVET Authority Board and management and UNESCO-UNEVOC fraternity.

The team lauded the college for scaling the heights in imparting top-notch skills in matters hospitality to students.



*Participants pose for the photo after the conference*



# Digital Training Skills for Effective TVET Instruction

## Three Digital Training Skills for Effective TVET Instruction

### Digital Training Implementation

The digital world has changed how we live our lives. It's also changing how we train people in TVET. This article will give you an overview of the 3 main digital training skills and the different types of digital tools available for use by trainers and learners, and provide practical advice on how to implement these into your training programs.

#### 1. Develop e-training material

There are lots of ways to develop e-training materials. However, there are some crucial factors that should not be ignored when undertaking e-training content development for e-training course materials. The 5 tips required to create successful e-training material are elaborated below:

##### i) Employ Highly Qualified and Experienced Faculty

This is the most crucial factor in developing e-training material for a successful

digital training implementation.

If your TVET trainers are not well versed in this area, it's time to upskill them with the necessary knowledge and skills.

##### ii) Integrate 3D Animation, Simulations, Games, and Quizzes for enhanced comprehension

Making e-training content development informative and relevant with text is not enough. Unless the content is made attractive, lively, fun, and engaging, the e-training material may fail to attract students, especially those in the TVET sector. To make content engaging, integrate 3D animation, simulations, games, and quizzes into the e-training material, therefore, enriching TVET learner comprehension on different concepts.

##### iii) Create Relevant e-training content

Learners prefer to learn from content which they find simple, relevant, and informative. Therefore, e-training content development should not be monotonous or passive, but encourage the learners to

pay attention.

##### iv) Structure your training journey

E-training content should be designed to offer a logical and structured journey for the learners in the form of learning paths when it comes to training content. Logically, subdividing the main course into several courses depending upon available learning time for course completion is of significant importance. This structured and organized-learning path gives learners clarity on which course to complete first and helps define a learning path for a certification program.

##### v) Assess Learner Performance

An assessment of a student's performance should be provided periodically. In order to develop high-quality e-training material, you should follow the above tips to create an effective one.

## 2. Deliver Online Training

For successful digital training to be implemented, you need to deliver your online

training effectively after developing the right & effective e-training material. Here are the top five (5) tips for delivering effective online training.

### **i) Using the Right Technology**

Providing access to the right technology is important to allow your TVET trainers to get their training done effectively. No one wants technical hiccups to get in the way of their training time. Besides the internet facility readiness, you will also need to provide access to laptops or desktops that is compatible for the digital training, microphones as well as the appropriate software and licenses to use it. Your trainees will need login details and support to navigate the programmes they need to use.

### **ii) Create a Content Library**

If your e-learning material is to be used for every batch of students, there's no point reinventing the wheel every year and creating a new course. Organize and store reusable content, such as training materials, assessments, poll questions and session guidance notes for carrying out the digital training.

### **iii) Keep your Learners Engaged**

Not everyone will be enthusiastic on digital learning, particularly TVET students who may have a shorter attention lifespan. But it doesn't mean the courses can't be interactive and surprisingly fun and informative. Try using tests to evaluate knowledge retention during the session and get immediate feedback with polls. Encourage small-group interaction with breakout sessions. Or you could broadcast an image of your whiteboard to trainees and share your updates in real time.

### **iv) Assess What Your Trainees Have Learned**

Once your trainees have completed their learning, you also need to assess how they got on by finding out, for example, what the pass rate is, what questions proved tricky or if there are any outstanding trainees who need to complete their learning. Look into whether your platform or web application allows you to get detailed reports on session attendance, test results and assessments.

### **v) Reward Your Trainees**

Just because the learning schedule you set

is online, it doesn't mean you can't reward your trainees in other ways to congratulate them on completing the digital training. For example, perhaps you could reward the highest scorer.

### **3. Conduct Online Assessment**

Online Assessments are the new normal, as learning has transcended to be disseminated using technology. E-learning is the current mantra, beyond pen and paper. Online Assessments are challenging because they are difficult to construct using the tools available. Nevertheless, their benefits are farfetched. Online Assessments are easier to explore and data collection on the performance of the learner becomes easily accessible, easily adaptable, less time-consuming, and leverage new data collection.

**Not everyone  
will be  
enthusiastic on  
digital learning,  
particularly  
TVET students  
who may have  
a shorter  
attention  
lifespan.**

The Online Assessment should be achievable by the learner, unambiguous in approach, should include a baseline criterion for the learner, easily understood by all learners; and feedback must be provided preferably in a written format which is accessible to all learners. The quality of the online assessment determines its efficacy, universal approach, genuine scores and real-time calibre of the learner

Assessment is the process of assessing the level of competence that includes the skills, knowledge and attitude of a trainee while performing the assigned tasks.

It is implemented to determine whether a trainee has reached the skill level set for the purpose of awarding certification.

### **Online Assessment Tools**

Google Forms is a popular Online Assessment Tool used by trainers/tutors. It is easy to create small quizzes or multiple-choice questions.

Other tools which have gained usage in current times are Skoolbeep, The Answer Pad, Edulastic, EasyLMS, Examsoft, CodeSignal and others.

Online Assessment tools can facilitate real-time grading, help take online examinations using assessment software, and help the teachers who logged in to keep pace with the learning.

The software chosen should have inherent features such as timely updating from time to time for a smooth LMS, 24/7 chat support, an auto-save option in case of internet or electricity disruption, and be highly user-friendly.

### **Designing an Effective Online Assessment**

The internet is an ocean of opportunities. Assessments may be conducted as holding polls, conducting webinars, educative videos, Learning Management portals and others.

**Create Clear Rubrics** – which should be conveyed transparently to the learners before the assignment. The Assessment format, grading system and roadmap to take the assignment should be crystal clear to make a fair judgement of scores.

**Purpose of the Assessment** – should be established before the design of the Assessment. The objective, assessment length, test conditions will make the purpose clear and assessment goals effective in output.

**All-Inclusive Approach** – The assessment design should be all-inclusive with Multiple Assessments to effectively test learners according to their level. Accessibility, clarity, technology facilitation, and a step-by-step approach will enable holistic learner data.





# Knowledge Management And Digital Transformation: Two Conjoined Twins

## 1. BACKGROUND

Most institutions of training and learning are considering or already implementing knowledge management strategies, and the prominence of knowledge management cuts across organisations including profit-focused corporate world.

Knowledge management theorists argue that the increasing notability of knowledge management is driven by the recognition that it enhances creativity and innovations in organisations. Whereas the core function of institutions of training and learning is to transfer skills and knowledge from experts to trainees in a school setting, the field of knowledge management goes beyond knowledge transfer process as it includes oth-

er crucial processes. The emergence and increased use of digital technology has provided an opportunity to easily embrace knowledge management practices and the automation of knowledge management processes.

Thus, in the implementation of knowledge management practices within your institution, it is prudent to ensure they are aligned with your digital transformation strategy. Most knowledge management analysts argue that the two strategies are conjoined at the hip and their implementation should go hand-in-hand.

But before analysing the convergence between knowledge management and digital technology, one needs to understand what knowledge management is and how digital technology fits in this space.

Oxford dictionary defines Knowledge as “facts, information, and skills acquired through experience or education; whether it is theoretical or practical understanding of a subject matter”. Whereas knowledge is classified into various categories in knowledge management literature, there are two basic categories of knowledge. The two classifications are: explicit knowledge and tacit knowledge. This classification is based on how it exists or is transferred. So, knowledge management is basically a set of processes adopted in an institution in controlling and coordinating “facts, information, and skills acquired through insights, experience or education”.

Therefore, based on this definition; some critical aspects of knowledge management include the development, implementation,

and maintenance of appropriate institutional process capabilities and digital technology infrastructure to enable knowledge creation, knowledge discovery, knowledge sharing/transfer, knowledge storage/retention, knowledge protection, etc.

The first basic category is explicit knowledge. Explicit knowledge is effortlessly accessible and easy to store in a coded form – written or spoken. Basically, these are facts, information or skills which can be accessed by reading documents, collecting and processing data, listening to recordings, etc. Explicit knowledge is easy to articulate and communicate in tangible forms - written or verbal forms. The second category is the tacit knowledge.

Tacit knowledge is a collection of facts, information and skills that are acquired through personal experience and interactions between persons, and is highly contextual. It is extremely individualised and it can best be created, discovered, transferred, and retained through the socialisation between persons using observation as a key method of knowledge acquisition e.g., in mentorship and apprenticeship scenarios. To code tacit knowledge into documents, reports, and recordings is difficult because of the of its nature – highly domiciled in an individual and highly contextual because it is manifested through individual behaviour.

As previously stated, Knowledge management goes beyond knowledge transfer. It includes processes like knowledge creation, knowledge discovery, knowledge collection, knowledge organisation, knowledge transfer/sharing and knowledge protection. From a digital perspective, the implementation of each of these processes would require a different set of digital technology capabilities to be deployed. However, the different digital capabilities can be found in a single platform thanks to the current trend of technology integration, cloud computing and interoperability among different sets of digital technologies.

## 2. KNOWLEDGE MANAGEMENT PROCESSES

Let us now look at how digital technology enables knowledge management processes,

and this view mainly applies to the management of explicit knowledge. The management of tacit knowledge is better done through socialisation process as it is very difficult to automate tacit knowledge. Mentorship and apprenticeship are two recommended approaches in the management of tacit knowledge.

### Process 1: Knowledge creation

This process basically refers to the management of new learning and innovative ideas emerging from time to time in an institution. In other words, it is the management of the ideation process. The availability of digital technology to manage the ideation process is still at the infancy stage of maturity although a number of such digital tools are currently available in the market. These tools are anchored on one fundamental framework - the management of the exchange of ideas among individuals in a team. So, basically, these are team collaboration tools that help team members to brainstorm ideas without losing track of how the idea is evolving. Such tools include BrightIdea, Delib Dialogue, GSA ideation platform, Hype innovations, IdeaScale, etc.

### Process 2: Knowledge discovery

This process involves activities that could generate insights and comprehension from data analysed from structured and unstructured data sources. For example, insights could be obtained from data collected from various sources either through empirical research, operations audits or inspection, field activity reports, etc. The key digital technology available in knowledge discovery are digital tools that could facilitate data collection and data mining; data modelling, and data analytics. Examples of digital technology tools for data mining and modelling include SPSS, Tableau, Rapid miners, etc. For tacit knowledge, personal experience and interactions is the main driver of knowledge discovery and this discovery happens largely through socialization between persons – an expert and a novice.

### Process 3: Knowledge collection and Knowledge organization

The knowledge collection process involves activities like gathering theme-specific files, documents, articles and reports to set up a knowledge database while knowledge organisation refers to classifying, indexing and describing them according to their themes, content, and context. The knowledge organisation process promotes accuracy and representation of data, information and knowledge order by standardizing data names, creating data storage folders and sorting data and information. This process focuses on systemizing the knowledge (datasets and information) and preparing it in a way that is effortlessly understandable and easily accessible to the users.

From a digital technology perspective, this process is easily digitised through the development of online portals for external stakeholders to access specific documents, reports, and records; and staff portals for internal employees to store and retrieve sharable documents and information. This process could also be achieved effectively through deployment of electronic document management systems (EDMS). Further, most enterprise resource planning (ERP) systems have features on information collection, information organisation, information sharing, and information dissemination. Other cloud solutions like Microsoft Office 365 have features that offer knowledge collection, knowledge organisation and knowledge sharing capabilities.

### Process 4: Knowledge sharing and knowledge transfer

One of the key components of knowledge management is the accessibility and distribution of knowledge among employees or stakeholders of an institution. Knowledge sharing and transfer could be effectively achieved by deploying learning management systems (LMS) for both internal employees and external stakeholders. Whereas learning management systems (LMS) are widely deployed in teaching and training environment, they could be used in the wide scope of knowledge management within an institution for employee learning and outside to enable knowledge ex-

change among stakeholders.

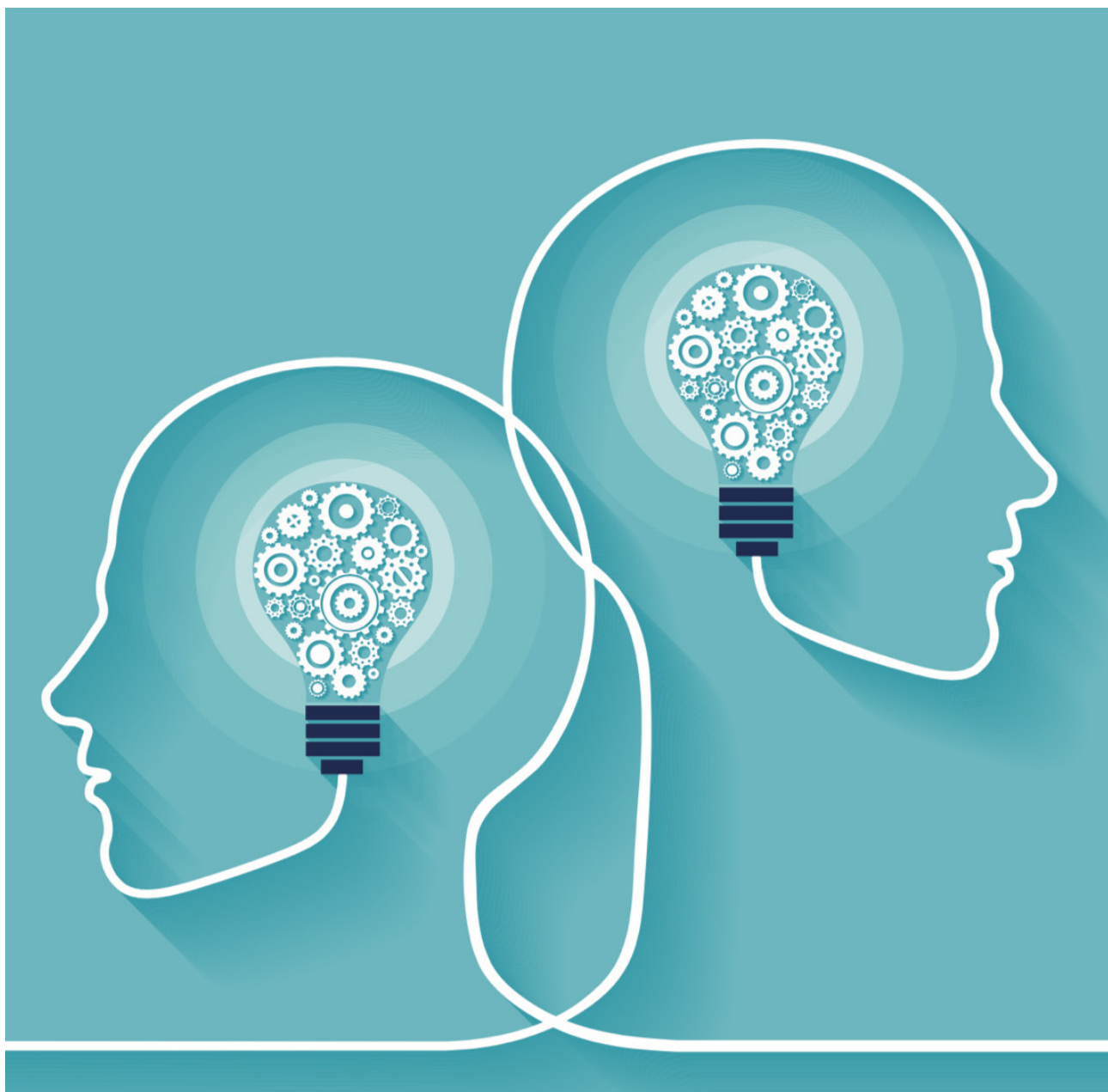
Just like any other crucial resource, knowledge need to be protected. So, while deploying digital tools for knowledge sharing and transfer, considerations should be given to accessibility by each stakeholder. This is necessary because not all information or knowledge should be available to every stakeholder- internal or external. Often, information or knowledge should be classified per the applicable institution's policies. This classification should then

guide the accessibility of such information or knowledge. Most modern digital tools that support knowledge management capabilities come with permissions or privilege settings so you can grant stakeholders permissions to different parts of the knowledgebase based on their use, roles, or context.

### 3. SUMMARY

In summary, the digital tools suggested in this article and the specific approach-

es are not prescriptive but should act as a guide in the operationalisation of knowledge management strategies. Institution specific context should direct the kind of digital technology to adopt in knowledge management strategy implementation. This is critical because the implementation of knowledge management strategies and digital transformation strategies go hand-in-hand as the two are conjoined twins that converge in many respects.





# TVETA Director General Dr Kipkirui Langat Lauds BEAR II Project As Revolutionary



TVET Authority Director General Dr. Kipkirui Langat

**T**TVET Authority Director General Dr. Kipkirui Langat lauded the achievement of Better Education for Africa's Rise II dubbed BEAR II project, saying that it has enhanced the quality of training offered to trainees by building capacities of TVET trainers and institutions.

Speaking October last year during the presentation of the Evaluation report for the project, Dr. Langat noted that the evaluation report, which captures the implementation of the project and the deliverables will form the basis for future plans and the sustainability of the project, including mobilization of resources.

*"The BEAR II project has achieved a lot since it was rolled out. This includes increasing relevance of TVETs to the needs of our economy," Dr. Langat said.*

Dr. Langat pointed out that there is a great need for TVET institutions to work together with the private sector to build capacity

and develop green economy. He reiterated that the six benefiting TVET institutions should go green especially by embracing green technology and the use of alternative energy sources.

The project, which was rolled out in 2017 to support five Eastern African countries of Ethiopia, Kenya, Madagascar, the United Republic of Tanzania and Uganda, to improve the relevance, quality and perception of their TVET systems came to an end in October.

BEAR II drew on the knowledge and experience from the first BEAR project which was conducted in 2011 - 2016 and supported TVET systems in five Southern African Development Community (SADC) countries, namely: Botswana, DR Congo, Malawi, Namibia, and Zambia. BEAR III Project which kicks off next year will benefit West African countries.

UNESCO regional Director Prof. Hubert Gijzen said that the BEAR II project was

a journey that kicked off in 2013 and was first executed in Southern African countries that are members of the SADC before it was rolled out to Eastern Africa.

*"This partnership with the Republic of Korea is not just project-based, its programmatic and long-term. This event may mark the ending of the project; it also provides a stepping stone to further expand our strategic engagements in skills development," Prof. Hibert said.*

The project was developed in close partnership with the Ministries of Education and is the result of a series of meetings and consultations with the governments and stakeholders of the TVET sector in the beneficiary countries.

It achieved a number of milestones including the development of policies to guide the TVET Sub-Sector in Kenya, the Open Distance and Electronic Learning (ODEL) policy, Continuous Professional Development (CPD) policy framework, Career Guidance and Counselling Framework, and Quality Assurance Manuals. The project has also established the National Skills Getaway for Kenya, a platform that will be useful in the sharing of necessary information among youth and other TVET stakeholders.

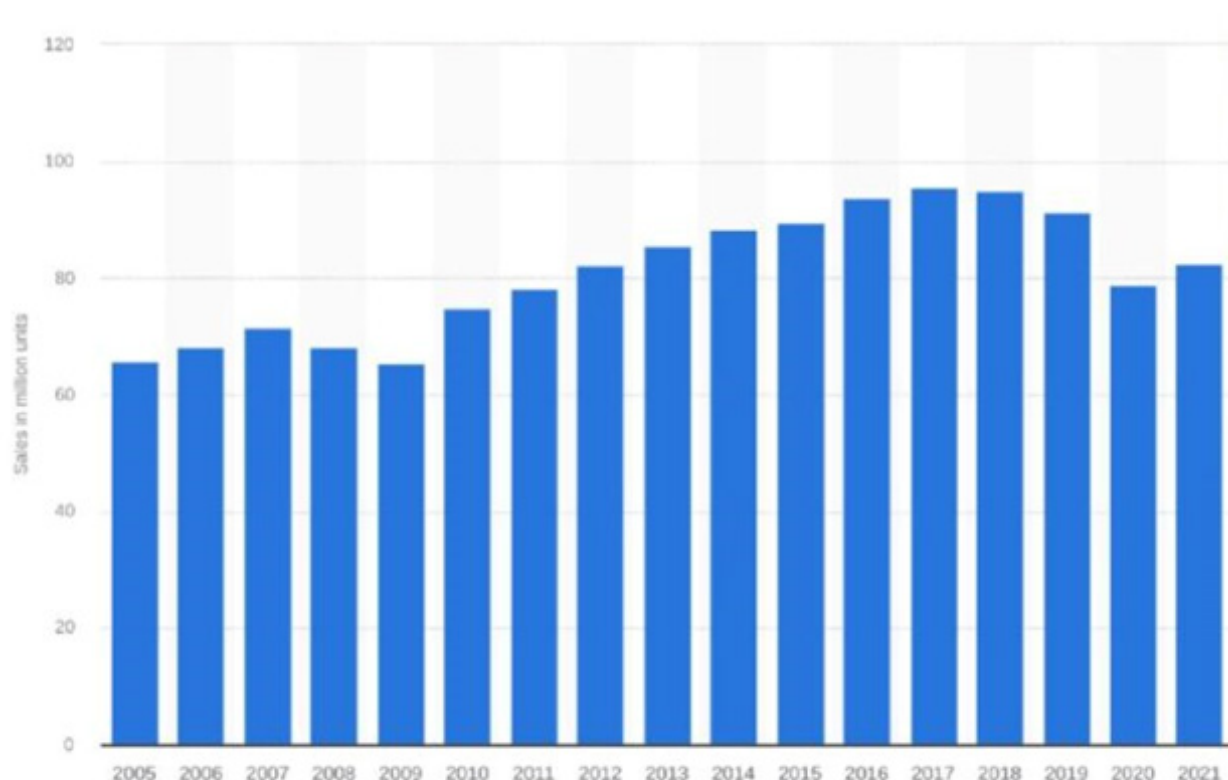
As for the objective of improving perception of TVET, the project facilitated the country to join WorldSkills International, a global hub for vocational skills competitions aimed at promoting the recognition of skilled youth nationally and internationally. The project helped WorldSkills Kenya to hold its first pilot competition event in Mechatronics and later facilitated the country to participate in WorldSkills Africa competition held in Swakopmund, Namibia, which took place from 28th March to 2nd April, competing in Cooking, Restaurant Services and Mechatronics. Kenya got a Gold medal in Restaurant Services and a Bronze medal in Cooking.

# Changing Landscape of Careers in the Automotive Industry

For every 60 Million vehicles produced, 9 Million people were employed

The automotive industry is a major industrial and economic force around the world.

The total automobiles sold around the world between 2005 and 2021 has been shown below:



Even with the observable effect of the Covid-19 pandemic, the automotive industry did face a tremendous dip but it also did well in properly adjusting its course. The very nature of the industry (innovation driven) allowed nations to shift their focus towards better energy sources during the global “shutdown”. Thus, giving rise to new sectors and demand.

## Employment opportunities in the Automotive Industry

The automotive industry has always been a driving force for constant innovations in every involved sector so as to cater to the rising demand around the globe. This requires constant funding, R&D (Research & Development) and skill upgradation of the workforce.

In the current industry scenario, in-house training is provided by experienced associates in collaboration with vocational education and training institutes.

According to the Research Unit for Political Economy (R.U.P.E.), the combined employment in the automobile and auto ancillary unit's industries reached 1.4 million in India. India's annual production of automobiles in FY22 was 22.93 million vehicles.

In the European Union, 13.8 Million people were employed directly or indirectly by the automotive sector out of which 2.6 Million were under direct employment by manufacturers of motor vehicles.

India recorded 5.2 million employments in

automotive production, sales and services combined.

The automotive industry not only faced the COVID-19 pandemic's problem but also the global microchip shortage problem and emerged with better plans for innovation.

Disbanding the traditional way of better microchips for better functionality, manufacturers made use of available microchips (varying performance capacities) and created new, better software's for the consumers to use in their vehicles.

## Trends and Careers in the Automotive Industry

With rapid technological developments

across other engineering sectors happening around the globe, the Automotive Industry has entered an era of public demand for a connected, renewable energy operated, smart vehicle. In-house software development and training is now an extremely important program for the entirety of the automobile sector. Major corporations are recruiting skilled software developers, ethical hackers and IT experts to create their own individual Operating Systems with high security standards for their vehicles.

Global Digitization has allowed the automobile industry to hire social media executives/ influencers to manage their content on various platforms creating more than before, varied and strategic employment across multiple sectors. The trend of the future in the Automotive Industry currently follows the EASCY rule:

- **Electrified** – emission free mobility, chargeable from renewable sources, low carbon imprint,
- **Autonomous** – self driving vehicles, use of advanced Artificial Intelligence (A.I.), reduces human error,
- **Shared** – managed fleets of shared vehicles, low mobility cost, best for public transportation,
- **Connected** – vehicles connected to the internet, data streaming capabilities,

- **Yearly updates** – annual software updates, security checks, debugging tendencies.

Hardware capabilities also continue to expand for the automotive sector with domains like electrification; body design, infotainment etc. are also as lucrative as software for a solid career in this industry.

With demand and research in autonomous driving moving forward, huge scopes in the domains of mechatronics, automation, computer vision and A.I. can be predicted for the future.

Some of the current highly sought after roles for engineering professionals in this industry are:

#### Data Science

Deals with data analytics and is in high demand as the main purpose of this role is to analyze all sorts of input and output data to improve production cycle, reduce production cost and optimize the A.I. workload. Some of these job roles include Telemetry Software Engineers, Data Scientists, Deep Learning Performance Engineers, A.I. Inference Software Engineers.

#### Research

Deals with the ever changing customer demands and needs. Data Annotation Engineers and Machine Learning Scientists work with camera data sets to train the neural network of the A.I. for better

computer vision capabilities. Business Intelligence Administrators come into play for their critical decision making capabilities for the business side of the automotive industry.

#### Design

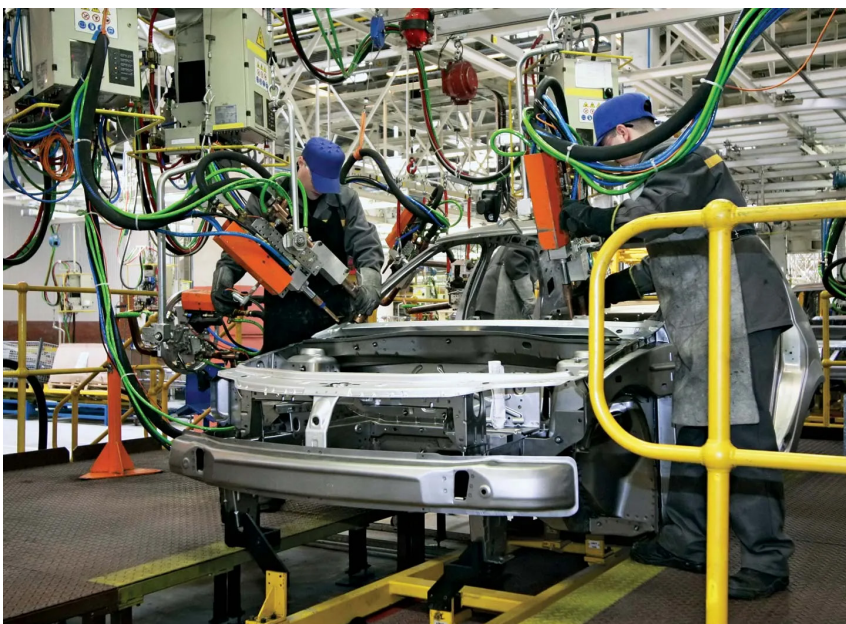
Mechanical Design Engineers design and build prototypes of the vehicle's overall structure in tandem with Sensor Hardware Designers who work with the interior & exterior sensory units of the vehicle. Battery Process Engineers are responsible for the design, testing and optimization of battery cells for power.

#### Production

Control Engineers are responsible for the automation of repetitive tasks to save production time. Sensor Integration Engineers modify and connect the various sensors with the vehicle for different intended purposes. A Plant Operations Analyst is responsible for CMMS maintenance, routine & shutdown planning, scheduling and tracking of the sequential progress during execution.

#### Quality Control

Embedded Systems Engineers design and implement firmware validation procedures for equipment & automation. Quality Engineers deal with the creation of a company's quality standards and testing systems to reflect efficiency, reliability and performance.



“  
With rapid  
technological  
developments  
across other  
engineering  
sectors  
happening  
around the  
globe...  
”





# Companies ‘desperate’ to recruit technical engineers and data experts – report

By PA News Agency

**C**ompanies ‘desperate’ to recruit technical engineers and data experts – report  
Manufacturing firms are having to compete with top City banks and leading innovation companies to hire workers with digital and technical skills, according to a new report.

Make UK said its study showed the digitalization of production processes has accelerated in recent months, leaving companies “desperate” to recruit the best qualified technical engineers and data experts.

A survey of 180 manufacturers found that three in five have plans to recruit engineering technicians and production and process engineers, while one in four were looking to hire data analysts.

Half of those surveyed said they cannot find suitably skilled staff locally.  
Make UK chief executive Stephen Phip-

son said: “To address the issue of labour shortages which is now at critical point, Government must ensure that the revised Shortage Occupation List is in place as soon as possible to plug the huge skills gap in data and digital technicians which are simply not available to employers from the domestic labour force.

“Government should also look to urgently create an Employer Training Fund, funded by a portion of unspent Apprenticeship Levy funds, to support the upskilling and retraining of existing employees in critical skills as well as providing support to bring through the next generation of talent through routes such as T Levels for manufacturers to train up straight from school.

“This would also be the time to introduce apprenticeship incentives for areas of skills shortages, where targeted incentive payments are made available for apprenticeship courses in those skills areas where supply is scarcest.”

**Half of those surveyed said they cannot find suitably skilled staff locally.**

# Corporate Risk Management: The Pathway to Resilient TVET Institutions

By Alloys Ambuli



TVETA Assistant Director Research Alloys Ambuli

**T**wo years ago, the COVID 19 pandemic visited with devastating consequences. All sectors of the economy were adversely affected by the measures recommended to control the spread of the highly infectious virus.

Technical and Vocational Education and Training (TVET) institutions were not an exemption. The institutions' ability to anticipate, prepare for, respond and adapt to sudden disruptions was tested to a great extent. The pandemic brought to the fore the corporate governance weaknesses that exposed institutions to both internal and external shocks.

A study conducted by the TVET Authority in 2021 showed that few institutions, 20% NP, 10% TVC and 1% VTC had embraced online training before the outbreak of the pandemic in Kenya.

It is not clear whether the decision to explore online training by these institutions had been motivated by the need to achieve some level of resilience in the event of disruptions to face to face training model or if it was merely to inject flexibility to the instructional process.

Resilient Institutions are responsive, adaptive and focused on meeting their objectives during uncertainties. At the core of any resilient institution is a robust corpo-

rate risk management system and business continuity strategy. Risk management process ensures that organizations are able to anticipate risks and put in place measures that increases the chances of achieving organizational objectives while at the same time limiting the negative effects of risks. Institutions with a strong risk management function experience minimal effects in the face of uncertainties since they are proactive in deploying mitigation measures to counter potential risks and emergencies.

Mwongozo- a code of governance that binds all public institutions of which TVET institutions are part, provides that public institutions shall establish a risk management unit/function which will among others; develop and implement a risk management framework.

The ISO 31000:2018 Guidelines, provides principles, framework and the process for managing risk in any organization regardless of its size, activity or sector. The guidelines further provide that risk management shall be an integral part of all activities in an organization including governance, planning and performance management processes at both the strategic and operational levels.

Other documents that guide risk management include the "Guidelines on risk management for National and County governments" released by the National Treasury in 2020 and individual institutions' risk management policies. Private institutions are expected to manage risks through a process that is closely modeled around the ISO guidelines on risk management implementation and respective institution's articles of incorporation.

Risks are defined in the environment in which the organization seeks to achieve its objectives. Every beginning of the year, at the planning phase, institutions need to think through their strategies and identify all possible occurrences that could potentially derail them from achieving their objectives and document them in corporate risk matrix.

Risk mitigation measures and any available opportunities should be identified and documented in the annual corporate risk matrix. Institutions should strive to integrate risk management in all their operations, systems and processes in order to minimize on the effects of risks and take advantage of any available opportunities. There should be a mechanism to monitor implementation of all the mitigation measures as provided in the risk matrix. Failure to carry out risk management amounts to negligence on the part of the persons responsible and should be sanctioned.

There are many potential uncertainties out there, some of which are capable of devastating consequences especially as far as achievement of TVET institutions core mandate is concerned.

For example, the unpredictable flow of capitation funds for public institutions especially the newly established ones poses a great risk to the survival of the institutions given that their revenue streams are not diverse. On the other hand, the government interventions in public institutions through capitation, provision of state of the art training equipment, hiring of additional trainers, loans and retooling of trainers pose an existential risk to the private institutions which do not receive similar support. Institutions should therefore be proactive in managing risks to ensure that they are not distracted from achieving their strategic objectives in the event of risks.

In conclusion, for TVET institutions to become resilient organizations and achieve their objectives without disruptions from uncertainties, they have to manage risks, be agile and adaptive to the dynamic operational environment.

(The Writer is the former Chairman, TVE-TA Risk Management Committee)



Trainees of Meru during award ceremony

## Meru National Polytechnic shines in Africa Tech Challenge

**T**he Meru National Polytechnic in Kenya emerged third in the Africa Tech Challenge (ATC) out of six African countries who took part in the competition, which targets youth in technical training institutions.

Meru National Polytechnic students came third after Luyanji Institute of Technology from Zambia, which took the first position, and Zambia's Northern Technical College which was ranked second. Other countries represented in the competition this year included Egypt, Zimbabwe and Ghana.

ATC is an initiative of AVIC International, a Chinese multinational, in which participants compete on various technical skills with the winner securing scholarships to China.

The challenge resumed last year in July and culminated in November after a two-year

break due to the Covid-19 pandemic.

The competition, themed 'Limitless innovation', which is the seventh since its inception, focused on boosting design abilities in reading and drafting construction drawings using cutting edge technology tools.

### Initiative lauded

Speaking during the award ceremony in Nairobi, Kenya's Education Cabinet Secretary Ezekiel Machogu lauded the initiative for empowering Kenyans in manufacturing machine parts for export.

"We welcome more participants from the private sector including Chinese investors to participate in programmes like the ATC, which not only create employment, but also transfer the necessary skills for our young people to be entrepreneurs," CS Machogu said.

Mr Zhou Meifen, a Counsellor at the Chinese Embassy in Kenya, said the compe-

titition seeks to address unemployment in Kenya through transfer of technical skills.

"Since 2014, the programme has covered 248 institutions across 10 African countries. The Chinese government will continue supporting the initiative and to increase the number of scholarships awarded to study in China," Mr. Meifen said.

### Study scholarships

AVIC International Project Engineering Company vice president Xu Fei said the winners would get opportunities for internships, jobs and scholarships to pursue further studies at top institutions in China. He said that the firm is committed to providing essential skills to African youth for the modern job market through training and equipping technological institutions with the latest machines.

"The seventh ATC training and compe-



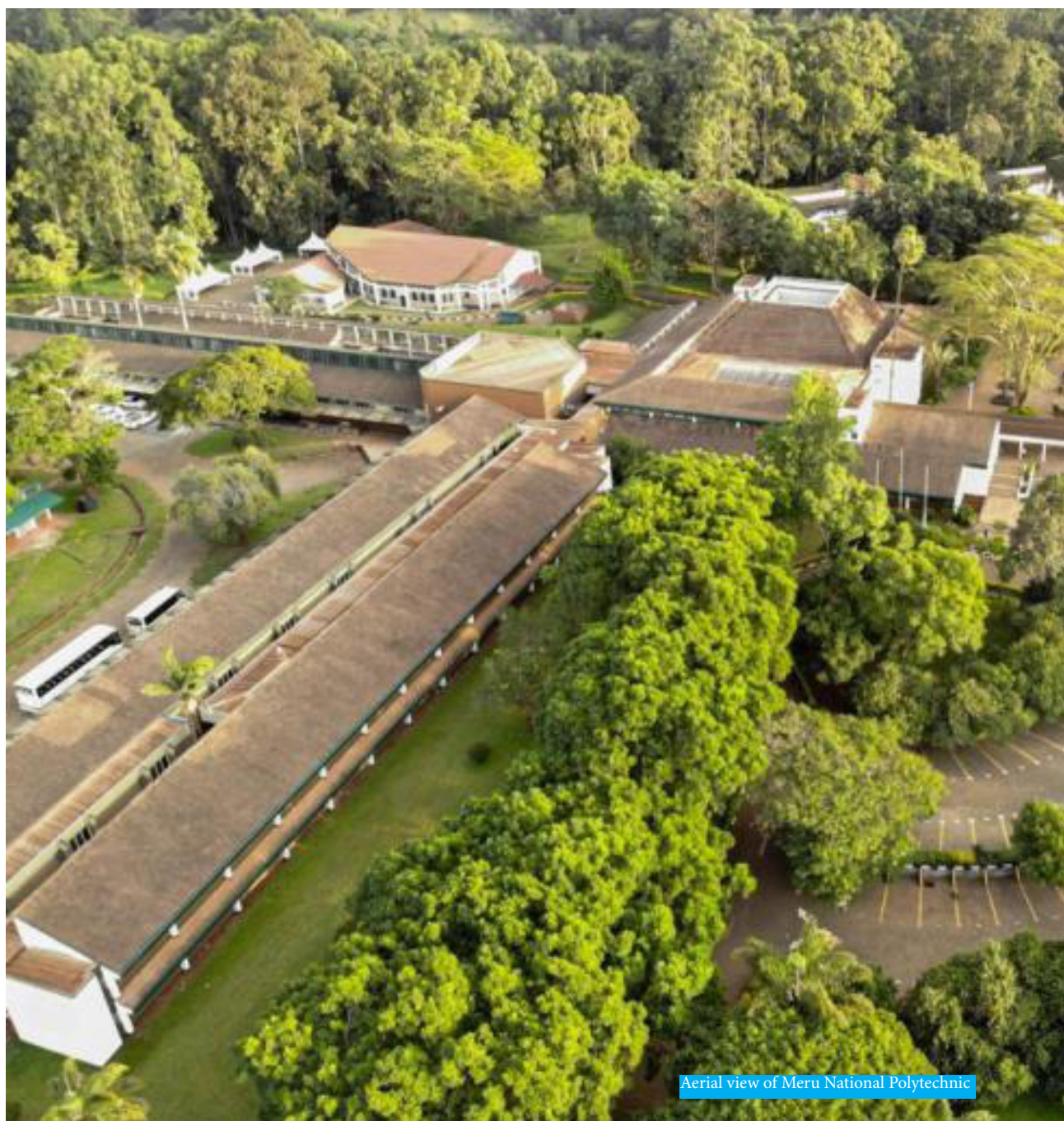
titions were digitally supported by AVIC International's online education platform which realized factors such as live streaming and the recording of remote training assignments and exams, allowing participants from different countries to participate in the training," said Mr. Xu.

The top three individual award-winning contestants get full scholarships to study in China.

This year, the challenge attracted 65 teams and 259 students as well as teachers from 45 institutions. It included a month of on-line intensive training from July 25 to Au-

gust 22.

The preliminary round was held on August 25 where one team from each of the six countries was selected to participate in the final round, with the first phase being launched on November 13 and the final one on November 19.



Aerial view of Meru National Polytechnic

# TVETA and Commonwealth of Learning (COL) Signs MoU to Enhance Capacity Building ODeL in TVET sector



Mr Robert Okinda, Advisor for commonwealth of learning

**T**he Technical and Vocational Education and Training Authority (TVETA) has received financial support of CAD\$ 24,800, about (Kshs. 2,295, 052) from the Commonwealth of Learning (COL) to fund the capacity building of its staff, TVET institutions, TVET trainers, and other stakeholders on ODeL standards and ODeL assessment tool.

The project, which is expected to be undertaken between the months of February 2023 and June 2023, will focus on facilitating the capacity building of TVETA staff in quality audits and accreditation of TVET institutions that offer ODeL programmes; to conduct advocacy, sensitisation and awareness creation sessions on the use of ODeL standards and ODeL accreditation tool in the

TVET sector; and to conduct ODeL pilot quality audit visits to targeted TVET institution.

During the signing ceremony, TVETA Director General Dr Kipkirui Lang'at appreciated the support that Kenya has received from COL over the years especially in supporting programmes touching on the integration of ICT in teaching and learning.

"This funding will go a long way in helping TVETA to identify the existing gaps and emerging issues in ODeL programmes, ODeL standards and the ODeL accreditation tool that needs to be addressed as a matter of priority," said Dr. Kipkirui.

Dr. Langat reiterated that the integration of ICT in teaching and learning in Kenya is a significant national policy issue which requires continuous monitoring and evaluation as it is a key strategic area for TVET Authority.

On his part, Mr Robert Okinda, the adviser for skills in Commonwealth of Learning (CoL), underscored their commitment to supporting the integration of ICT in education in Kenya and in the continent of Africa.

"We are happy that Kenya has identified ICT integration in education as a priority area and in this regard, COL would continue supporting Kenya's programmes aimed at enhancing ICT in education," he said.

Overall, the project is expected to improve the capacity of TVETA staff and other stakeholders in assessing the quality of ODeL programmes in the TVET sub-sector. This will directly build the resilience of the Open, Distance and

Flexible Learning (ODFL) model in Kenya's TVET system.

The Technical and Vocational Education and Training Authority (TVETA) is a public corporate agency in Kenya established under the Technical and Vocational Education and Training (TVET) Act No. 29 of 2013 to regulate and coordinate training in the country through licensing, registration and accreditation of programs, institutions and trainers.

Section 7 of the Act, 2013 gives the powers and functions of the Authority to regulate and coordinate training; inspect, license and register and accredit training institutions; accredit and inspect programmes and courses; promote access and relevance of training programmes; determine the national technical and vocational training objectives; assure quality and relevance in programmes of training among other functions.

On the other hand, Commonwealth of Learning (COL) was established in 1987 by Commonwealth Heads of Government. According to the Memorandum of Understanding on the Commonwealth of Learning, the main focus of COL is to create and widen access to opportunities for learning, making use of the potential offered by distance education and by the application of communication technologies to education. Thus, COL is committed to promoting equitable access to quality lifelong learning for all – believing, in effect, that access to learning opportunities will lead to progress in achieving sustainable development.



# Implementation of ISO 9001:2015 enhances service delivery.



TVETA staff holding the registration certificate

**T**VET Authority is implementing ISO 9001:2015 Quality Management Standard to which it was certified to in January 2021 by the Kenya Bureau of Standards (KEBS) Certification Body.

In line with its mandate, the Authority identified all the processes in the organization and developed the Standard Operating Procedures (SOPs) as guided by the requirements of the ISO 9001:2015 standard. As a TVET industry regulator that is charged with the regulation and coordination of the sector, implementation of the SOPs based on the ISO 9001:2015 standard has made it easier to run the operations of the organization by improving the efficiency and consistency of the Authority's operations, resulting in the improvement of quality of services provided to the clients.

The adoption of the Quality Management System based on the ISO 9001:2015 Standard was a strategic decision for the Authority by the TVETA Board to ensure that as a regulator of the sector and as the

lead in the development and enforcement of the sector standards, the organization had to implement the QMS in order to continuously improve its overall performance in terms of regulation and quality assurance and provide a lead in the development of regulatory and training standards for the improvement of the TVET sector.

Some of the benefits that have accrued to the Authority include;

a) The Ability to consistently provide services that meet customer and applicable statutory and regulatory requirements. This is exemplified in the processes of assessment of institutions, evaluation of trainers, assessors and verifiers, evaluation of CBET curricula, recognition and equation of qualifications and quality audits among other services which have been carried out efficiently and effectively.

b) Facilitating the opportunity to enhance customer satisfaction. In the implementation of its SOPs as guided by the requirements of the QMS standard, the authority places its customers at the center stage and ensuring that it meets and exceeds

the needs of its customers.

c) The implementation of the QMS standard has also enabled the Authority to identify risks and opportunities associated with the context to which the organization is operating on. This is very important as it has accorded the Authority an opportunity to implement risk mitigation measures that would have hindered the achievement of its objectives. Opportunities identified such as integration of ICT in its services by the deployment of the TVET MIS have greatly enhanced service delivery to the customers.

On the basis of the above benefits the Authority in its endeavor to further enhance its service delivery shall endeavor to attain other certifications such as the ISO 27001 on Information Security Management Systems (ISMS), ISO 30422:2022 on Human Resource Management and ISO standards on equipment and Infrastructure.

**From the Office of the Management Representative.**



# The Director General Diary



TVETA DG with Kenyan delegation at World Skills Special Edition – Stuttgart Germany 2022

## Presentation to the Presidential Working party on Education Reforms

TVET Authority Director General Dr Kipkirui Langat and the Chief Principal of Kenya School of TVET on Friday 14th October 2022, presented a TVET position paper to the presidential working party on education reforms.

The presentation which mainly served as an orientation to the working party, focused on the general landscape of TVET from a global, a regional and a local perspective. It also highlighted the TVET reforms that have been undertaken in the country, the existing challenges currently and suggestions on how to address the specific issues on TVET as spelled out in the TORs for the presidential working party.

## Launch of UNESCO Strategy for TVET for 2022 – 2029

The Director General Kipkirui Langat and the Deputy Director, Research and Development Dr. Osawa who is also the UNEVOC Centre coordinator, were invited to attend the UNESCO international conference to approval and launch the UNESCO Strategy for TVET for the period 2022 – 2029. The theme of the new TVET strategy is “Transforming Technical and Vocational Education and Training for successful and just transitions”.

The event took place on the 25th and 26th October 2022 at the UN Campus in Bonn, Germany. Dr. Osawa participated in person while the Director General attended virtually. During the conference, the Dr Kipkirui Langat presented a status report of the BEAR II project highlighting the deliverables and achievements of the project in Kenya. This is a project that was supported by the Government of the Republic of Korea and implemented by UNESCO in 5 countries in Africa.

## World Skills Special Edition – Stuttgart Germany

World Skills Germany who are the mentors of WorldSkills Kenya invited the Kenyan delegates and technical experts to attend the WorldSkills special edition 2022 which was held in the German City of Stuttgart from 30th September to 9th October 2022.

The Kenyan delegates and experts participated as observers, this provided an opportunity for the delegates and the experts to be mentored and capacity built in order to prepare them for future preparation of regional and global events.

### **The Bridging Innovation and Learning in TVET (BILT) event for Africa.**

The Authority in collaboration with UNESCO – UNEVOC, the Federal Institute for Vocational and Technical Training in Germany (BIBB), and the African Union Commission hosted a three-day hybrid conference from 7th to 9th November 2022 at the Boma Hotel, Nairobi. Kenya was privileged to host this high-level event with the theme of “Going green and digital: TVET for hospitality and tourism”

The international event attracted about 30 international participants from Europe, Asia – Pacific and Africa. The event activities included keynote addresses, focused group discussions to share global best practices and visits to two TVET institutions specializing in Hospitality and Tourism (BIHC and Kibondeni College) for peer learning in greening and digitalization.

### **Visit to the Republic of South Korea.**

The Director General Dr Kipkirui Langat accompanied H.E. President Dr. William

Samoei Ruto to an official visit to the Republic of South Korea from 19th to 25th November 2022.

During the visit the delegation held bilateral discussions between the two countries which centered on improving partnerships in trade and other areas. In TVET specifically, Kenya was seeking the support of the South Korean Government and their large industries in equipping of about 117 TVET institutions with modern equipment. It also sought opportunities for export of skilled labour to South Korean industries in the areas of welding, mechanical, civil, mechatronics and electrical engineering.

### **Visit to the United States of America.**

The Director General Dr Kipkirui Langat accompanied H.E. The President Dr. William Samoei Ruto to an official visit to the United States of America to attend the African Heads of State summit from 10th to 19th December 2022.

During the visit they held discussions with the leading technology companies in the US that included Google, Micro-

soft, Facebook and Intel on the development of Digital Skills for TVET institutions and providing opportunities for the Kenyan youth to engage in online jobs.

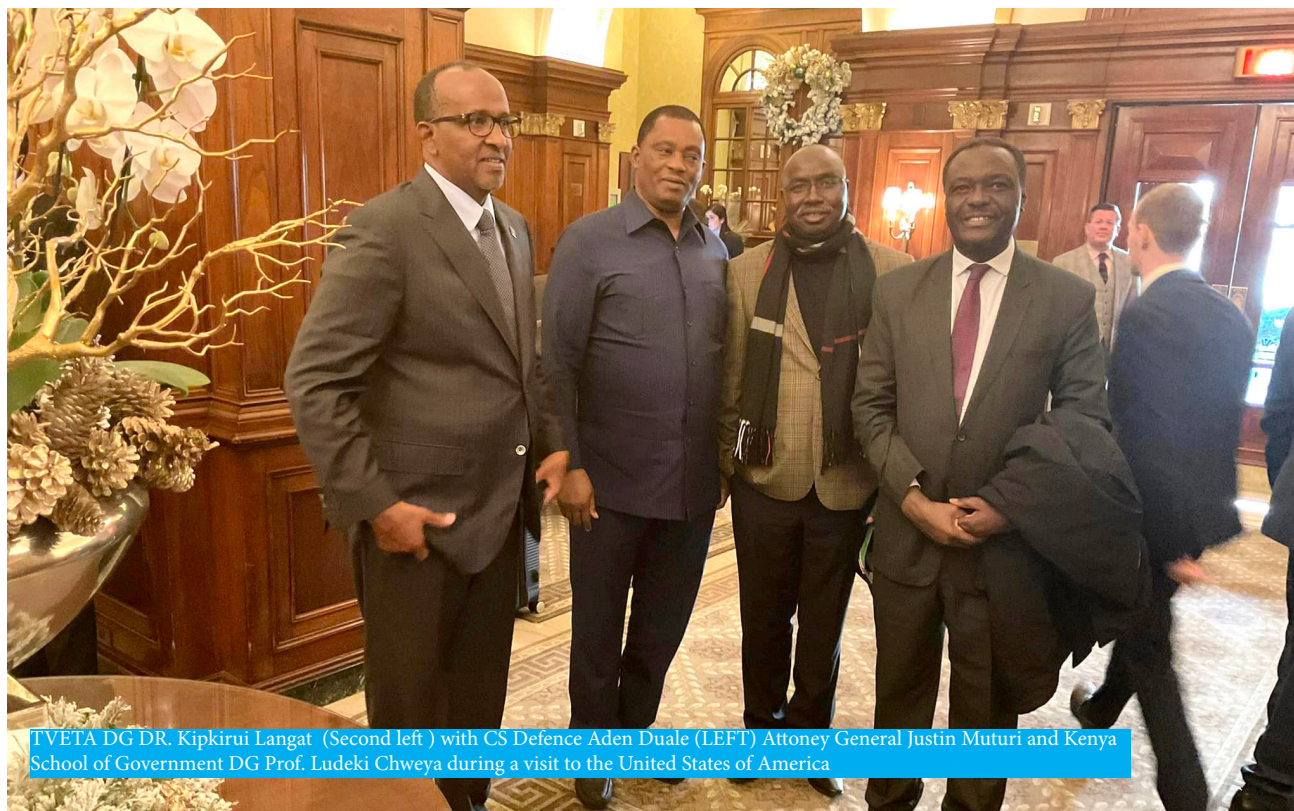
There are other ongoing discussions with other countries such as Serbia and other potential partners, all with the aim of providing opportunities to the Kenyan youth through export of skilled labour.

### **Launch of the Virtual Desktop Infrastructure Programme.**

The Director General Dr Kipkirui Langat joined President Dr William Ruto during the launch of the Virtual Desktop Infrastructure programme, on 6th December 2022 at the Kabete National Polytechnic.

This is an initiative of digital stakeholders spearheaded by Konza City Technopolis, ICT Authority and TVETA, which is aimed at which is aimed at giving the youth skills, competencies and attitudes needed to take advantage of jobs in the digital economy in out TVET institutions.

The project entails supply of ICT equipment, internet connectivity, establish-



TVETA DG DR. Kipkirui Langat (Second left ) with CS Defence Aden Duale (LEFT) Attorney General Justin Muturi and Kenya School of Government DG Prof. Ludeki Chweya during a visit to the United States of America



ment of a work lab in the institutions, training of staff and training of the trainees (youth) on digital skills for online jobs. The target is to train at least 1 Million youth in the next 3 years.

The programme has so far been rolled out in a few institutions including the Rift Valley Innovation Centre, Eldama Ravine TVC, Matili TTI, Eldoret National Polytechnic, and Kiziwa TVC. Plans for launch in the following institutions are underway, the Kisii National Polytechnic, Keroka TTI, Bondo TTI, Siaya IST, Sabatia TVC, Friends College Kai-mosi, Sang'alo IST, and Turbo TVC.

### **Discussions on Partnership with Gijima Company of South Africa.**

The Director General Dr Kipkirui Langat held a consultative meeting with two officers from a South African Company called Gijima, an affiliate of Guma group of companies, a private investor who is keen on seeking partnerships in the TVET sector in Kenya.

This is a leading company in South Africa in the areas of ICT, data and cloud

computing, Railways, Energy, Mining, Tourism and leisure, Education and Training, Health care and food security. The identified areas for possible collaborations are as follows;

- i. Development of a National TVET Competency Framework
- ii. Establishment of Ten assessment centers across the county
- iii. Capacity building of 1,000 TVET trainers in CBET curriculum development, assessment and certification.
- iv. Linkages of TVET with industry and Special Economic Zone.
- v. Development and implementation of a framework for digital transformation in TVET

The discussions are ongoing, which will lead to an MOU for implementation when complete.

### **County Vocational Education and Training Bill 2022**

Director General TVET Authority Dr Kipkirui Langat on February 7th 2023 attended a two-day stakeholder engagement on the County Vocational Education and Training Bill 2022 that was

convened by the 4th Senate Standing Committee on Education.

The conveners included the Chairperson of the Committee Senator Joe Nyutu, Senator Peris Tobiko and the committee members.

The TVET sector stakeholders included the Principal Secretary of the State Department of TVET Dr Esther Thaara Muoria, Acting Director General KNQA Dr Alice Kande, the Director General NITA Eng. Stephen Ogenga and the Director of Vocational Education and Training Eng. Mutinda Mwaa among others.

The Council of Governors was represented by H.E Dr Erick Mutai, Governor of Kericho County and chairperson of the Education Committee at the COG.

The retreat was convened for the Senate Committee to familiarize themselves with the mandates of the various actors in the TVET sub-sector and to receive submissions of the County VET Bill 2022 which is before the Senate.



PS TVET Dr. Esther Muoria and TVETA DG Dr. Kipkirui Langat during stakeholder engagement on the County Vocational Education and Training Bill 2022





## InJob! Takes lead in promoting inclusive education and promotion of employability for vulnerable youth in public VTCs

**A**n Italian NGO has rolled out “InJob! Pathways to inclusive education and promotion of employability for vulnerable youth in the public Vocational Training Centers” project to promote the educational, social and professional inclusion of vulnerable young people and youth with disability in Kenya.

The aim of the project is to increase the number of students with relevant skills, including technical and professional, to join the labour market, both as employment and self-employment.

The InJob is a 3-year project promoted by NO ONE OUT in partnership with CBM Italia Onlus, Technical and Vocational Education and Training Authority (TVETA), CBM International in Kenya, Companionship of Works Organization (CoWA), Girl Child Network (GCN) Laboratory Action Research for CO-development (ARCO-PIN).

InJob! is supported by the Italian Agency for Development Cooperation (AICS).

The initiative aims to strengthen the

Technical and Vocational Education and Training (TVET) system for the educational inclusion and the job placement of vulnerable young people and youth with disability.

In order to achieve the expected impact, the initiative features two synergic lines of intervention: one at national level (375 VTCs - Vocational Training Centers in 15 Counties), in partnership with TVETA, and one at regional level in collaboration with the NCCG - Director of Vocational Training Center (8 VTCs).

The national level action aims to strengthen the technical-managerial support of VTCs administrators and principals and promoting the disability mainstreaming. Thanks to a media campaign, the initiative aims to revitalize young people's perception of vocational training as a valuable choice.

At regional level the project aims to improve the Lifeskills, Counselling, SRHR (Sexual and Reproductive Health and Rights) and Career Guidance services in collaboration with 8 VTCs in Nairobi (Kiwanja VTC, Ofafa VTC, Dandora Green

Light VTC, Old Mathari VTC, Waithaka VTC, Kangemi VTC, Mathare VTC and Bahati VTC).

In addition, InJob! reinforces a business incubator for entrepreneurship training and mentorship targeting the VTCs alumni. The initiative promotes inclusive career guidance and job placement pathways for PWD (Persons with Disabilities) in collaboration with NCPWD (National Council for Persons with Disabilities).

The initiative, thanks to the support of the Research Department of TVETA and ARCO-PIN, will conduct a tracer study to track the effectiveness of the 8 identified public VTCs in Nairobi in equipping graduates with the necessary skills to successfully gain employment and to trace the related access to the labor market after the completion of the technical courses in which they were enrolled.

The study will examine the attitudes of the graduates themselves regarding job quality, relevance and effectiveness of their TVET education in securing employment, both the perception of the employers regarding the quality of the employees recruited from the pool of graduates.



## TVETA Director General holds meeting with US Tech Company Intellimedia

**T**TVET Authority Director General Dr Kipkirui Langat held a meeting with senior officials of Intellimedia, a US technology company and discussed how to partner in improving training in the TVET sector.

Intellimedia is a US and India- based technology firm. The company is currently underway to open Intellimedia Africa office stationed in Nairobi to serve the African market.

This was a follow-up meeting after the Dr Langat met the team in the US last year during the US-Africa Leaders Summit held in Washington, DC, in December last year, which was attended by President Dr William Ruto.

The DG welcomed the company to Kenya following their meeting in the US. He noted that President Dr William Ruto is keen

to ensure that his delegation to the US is still following up on some of the collaborations agreed upon during the December meeting with US companies.

“We are looking forward to partnering with and leverage on technology to assist our youths access opportunities in the digital space because 70 % of our population is youth. We need to give them the right skills and competencies and then link them to the job market.”

The Intellimedia Networks US Founder and CEO Teodros Gessese said the company has developed new applications for education and training content delivery that is geared towards practical and more vocational type applications, where students learn how to do things via apprenticeship, via watching, and simulate that in a way that helps deliver the most retention for students.

“Our technology makes it simple to deploy any training programme in multiple-viewing devices. Furthermore, close to bringing the capability to partner with other organizations in a very transparent way and in a way that is ideal for emerging economies,” he explained.

“We are very glad about the support we have received from the current Kenyan government to set office in Kenya, which will be headed by Ms Jane Nawezi and we have a Board of very capable Kenyans that understand the know-how to implement and support Kenyans, especially in the new digitalization age.”

The two entities formed a technical to streamline the areas of partnership ahead of their next meeting, to be slated before the end of the month.





# Kenya School of TVET is key in the realisation of TVET reforms

*Dr. Kipkirui Langat*

**T**VET has been gaining popularity and it is considered the driving force for sustainable development and wealth creation for any country.

Although TVET trainers are critical players in the realisation of TVET objectives, the issue has been a matter of concern in most countries due to the lack of quality and quantity trainers. Most TVET trainers are recruited from fresh graduates of vocational and technical colleges and universities, thus lacking industrial exposure and experience. Other challenges include gender disparity, linkages with industry, and issues of standardisation.

It is for these reasons that a number of countries, particularly in South Eastern Asia have introduced a raft of measures to improve on training and quality of trainers.

In Brunei, the country has introduced policies and practices that will ensure they have high-quality trainers, which includes enhancing trainers' professional standards and improving the image of TVET as a first-choice profession. Indonesia is focusing on trainer certification programs by stressing the importance of qualification and competency standards. Lao and Cambodia are focusing on raising their trainers' qualifications to higher diplomas and bachelor's degrees.

Malaysia is addressing the complexity of various providers including establishing the Malaysian Qualifications Agency (MQA) and transforming trainers' competencies by including industrial experience and industry needs, creating policy guidelines to develop highly effective instructors, and promoting trainer capacity-building programs by introducing a training levy.

Myanmar has introduced e-learning systems for trainers to further their education and training in accordance with National Qualification Standards (NQS) and ASEAN Qualification Framework (AQF). Singapore Institute of Technical Education is training its own trainers using a competency-based curriculum (CBC) and authentic learning approach using the TPCK model (Technological, Pedagogical, Content, Working Knowledge).

Thailand is emphasising the importance of education for sustainable development for TVET trainers, introducing Problem-Based Learning (PBL) and using instructional media. Vietnam is highlighting the importance of upgrading trainers both pre and in-service focusing on management, contents, curricula, training and assessment methods.

In Kenya, TVETA has developed a trainer's Qualification and the Competence

Standards Framework to guide the training and development of trainers. The framework categorises the core human resource providers into the instructor, trainer, developer trainer, manager trainer, and director in addition to the assessor and verifier. Each of these categories has different roles to play in CBET implementation and therefore requires different training approaches.

The minimum competencies for instructor and trainer include planning a training session, delivering CBET, conducting competency assessment, and maintaining training facilities in addition to ensuring internal quality assurance. On the other hand, a trainer developer focuses on the development of instructional materials while a trainer manager mainly emphasises governance and management. The assessor uses different methods to draw inferences about the competence performance of an individual while the verifier validates assessment activities in accordance with the set procedures to ensure the maintenance of quality and consistency of assessment of candidates for award of competence qualifications within approved centres.

Also, the trainers shall be required to renew their training licence periodically with evidence of Continuous Professional Development (CPD) as required by law. In order to implement CPD, TVETA is

developing policies, standards, guidelines and frameworks required for the development of a competent workforce. This is expected to be rolled out in the next year.

CPD include keeping abreast with the development of new technology and industrial working methods, support with curriculum development, new qualifications, and training. It is also part of a lifelong education by applying the recognition of prior learning (RPL) approach allowing some trainers who already possess the knowledge and skills to gain a qualification without completing a standard training or course.

As part of the professional growth plan, a trainer could be released back into the industry for a period of six months. This arrangement would provide an opportunity for networking with practitioners in the field, and learning about emerging skills and work processes. For any professional growth plan to be effective,

administrators must provide the necessary leadership and support. Naturally, if the trainers are well supported and their students succeed, it reflects positively on the administrators. By incorporating documented semi-annual accountability into a portfolio, more meaningful trainer development can be achieved. Effective professional growth plans, therefore, should be the joint effort between good trainers who want to better themselves and administrators who can provide the necessary leadership.

The establishment of Kenya School of TVET is therefore very important in actualising reforms relating to the development of high-quality trainers. These include the implementation of TVET pedagogy by establishing a real industry working environment through collaboration and utilising the workplace as a learning venue. Also using a competency-based model and incorporating project and problem-based learning as the

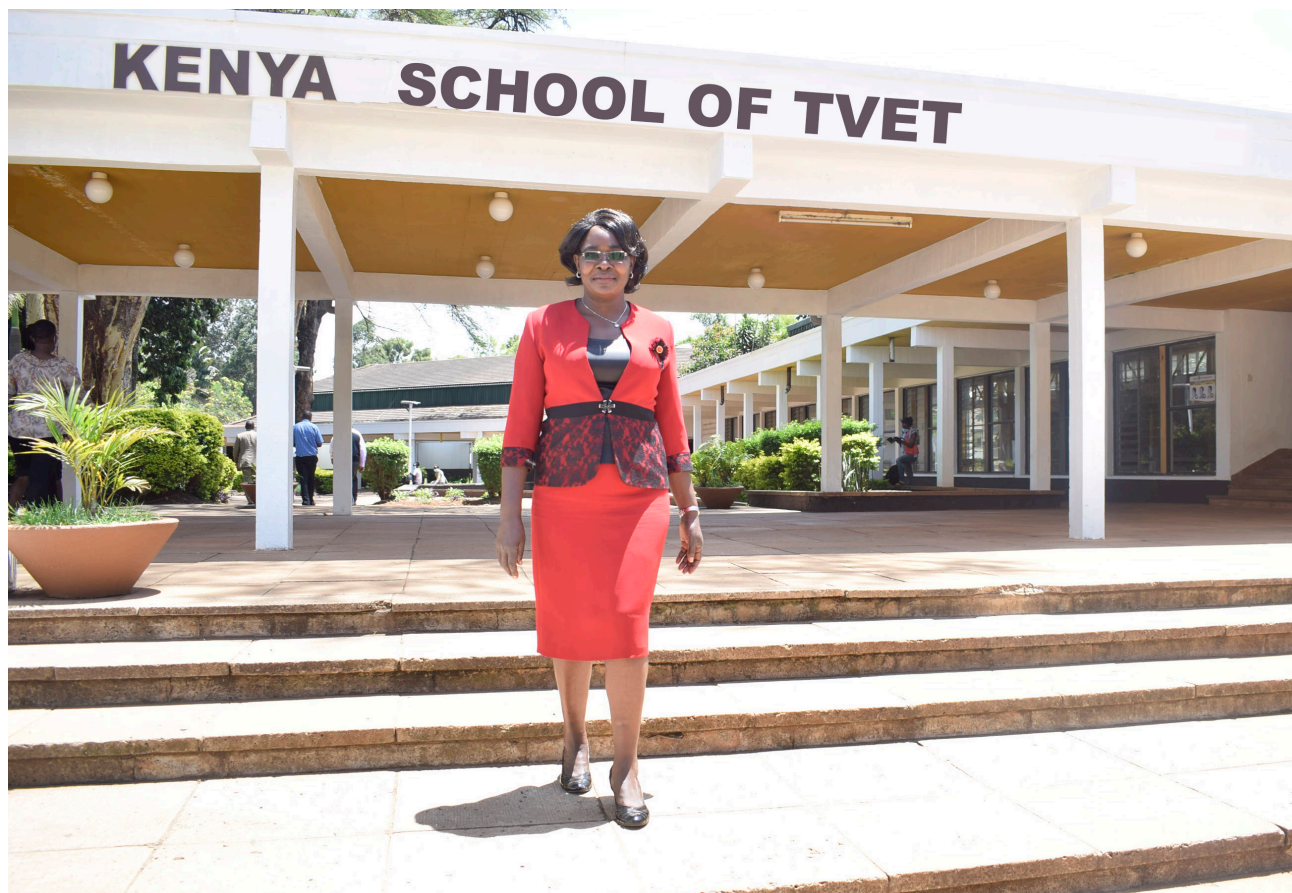
demand from industry for technical skills and employability skills is becoming more obvious as well as the adoption of vocational pedagogy coupled with the use of technology and 21st Century skills.

Training should emphasise different assessment techniques considering the complexity of individual students, fast-changing technology, and industry demands as well as holistic and authentic assessment requirements. Also, utilisation of various assessment tools such as rubrics, portfolio assessment, and performance-based assessment where learning outcome becomes the focus.

With concerted effort, support and collaboration from the various stakeholders, it is envisaged that the TVET training in Kenya will catapult to a much higher level, benefitting various stakeholders within the TVET ecosystem.

The author is the Director General TVE-TA

E-mail: [langat.langat@tveta.go.ke](mailto:langat.langat@tveta.go.ke)







## Car & General Launches a Training Program for Jua Kali Mechanics dubbed 'Cargen Tech-Up'

**C**ar and General Trading Limited has launched a training and empowerment program for technicians in the informal sector dubbed the 'Cargen Tech-Up'.

The program aims to equip about 3,000 artisans with mechanical and electrical repairs and maintenance skills for two-wheelers and three-wheelers in Kenya. They will also be empowered with business management and safety skills to boost their technical and entrepreneurial skills.

George Rubiri, the General Manager, said, "At Car & General, we want to develop and upgrade technical and entrepreneurial capabilities of private garage mechanics for two and three wheelers in Kenya. So far, we have trained 615 three

wheeler and 5,377 two wheeler mechanics and we are looking at enhancing this program."

"The program, costing over KShs 25 million per year, will expand employment and entrepreneurial opportunities in this sector. It will conveniently give jua kali artisans training access at zero-cost. It will also ensure easy access to quality service and parts to our customers that will enhance our philosophy of making customers smile on every street in every town," he concluded.

George Rubiri explained, "Overall, the 'Cargen Tech-Up' program will offer training on financial and business management skills necessary for successful entrepreneurship, restore public trust in the sector and promote economic growth."

Today, the boda boda industry has approximately 1.2 million riders earning an average income of KShs 1,000, which translates to KShs 1 billion per day and supports 6 million lives daily. Two and three wheeler transport has significantly eased transport challenges, facilitated trade and created employment in value chain. It is one of the biggest and fastest growing industries in Kenya. The jua kali mechanic is at the centre of the entire boda boda eco-system.

So far, the company has trained jua kali mechanics in Bungoma, Kakamega, Busia, Siaya, Kisumu and Vihiga counties in Western Kenya. We have also trained in Nakuru, Laikipia, Baringo and Meru in addition to Taita Taveta counties.



TVETA's Director of Accreditation and Outreach Services Fred Oanda (Center) Hosting the tanzanian delegation

## Tanzania Higher Education Delegation Pays TVETA Courtesy Call

**T**TVET Authority hosted a 15-member delegation from Tanzania, which is in the country to benchmark on higher education financing.

The delegation is drawn from the Tanzania Ministry of Education, the Higher Education Students' Loans Board (HESLB) and the Association of Africa Higher Education Financing Agencies (AAHEFA)

Led by the (HESLB) Executive Director Abdul-Razak Badru, the delegation aims at identifying the methodology; the existing gaps in the financing of higher education in the country and the cross-cutting challenges facing higher education financing in Kenya. This includes understanding the mandate and roles of the TVET Authority within the TVET ecosystem in Kenya.

TVETA's Director of Accreditation and Outreach Services Fred Oanda informed the team the role the Authority has performed since its inception. He underpinned the great impact the TVET subsector has had in the country, mainly through massive interventions by TVET Authority to create relevance and standards in TVET. In

return, this has lowered the employability odds of TVET graduates.

He added that, despite the long-term negative perception that has been attached to TVET education, there has been a paradigm shift in recent years through the awareness campaigns that have been carried out by the Authority and other stakeholders.

Oanda observed that TVET has been facing some cross-cutting challenges especially due to inadequate capitation of TVET Students. However, he appreciated the government for great interventions such as equipping TVET centres adequately and financing TVET students through the HELB loan product. He underscored that the enrolment to TVET institutions has been steadily increasing, thanks to the massive rebranding that has been done by the government.

He informed the delegation that the government is keen to ensure that all TVET institutions go digital, through the ongoing Virtual Desktop Infrastructure (VDI) programme. The program is part of the government's efforts to drive the digital sector forward and has already deployed 17 VDIs

Labs at Technical Vocational Training Institutions (TVETs) across the country. Each institution will have 100 Virtual Desktop Infrastructure (VDI), reliable power, security, and program coordinators provided by Konza Technopolis.

The delegation was keen to understand the collaborations with foreign agencies that have driven the transformation of the TVET sector in Kenya.

The Technical Assistant to the TVETA Director General Mr Andrew Too told the team that TVETA has entered into numerous Memorandum of Understanding with international development partners such as the Governments of South Korea, Germany, the World Bank, the International Labour Organization, Commonwealth of Learning (COL), among others.

He said that these arrangements have come in handy as they have earned scores of trainers and trainees an opportunity to benefit from exchange programmes, attachment and internships overseas.

Before visiting TVETA, the delegation has been to Higher Education Loans Board (HELB) and is expected to visit other stakeholders within the scope of financing and management of higher education in Kenya.



