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Government Commended for Apprenticeships, Internships and Industrial Attachments Framework

Electrical Engineering Trainers up-skilled to improve training delivery

Syllabus for electrical programmes revised in line with new code of practice for wiring premises

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TEVET NEWS

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Foreword



WE WELCOME you to our second quarter TEVET newsletter. During the quarter, coronavirus (COVID-19) continued disrupting physical delivery of services. The demand for e-services increased. With the suspension of walk-in services and re-engineered ways of serving the public using online systems to avoid total disruption of service provision. The online platforms included the Learner Data Management System (LDMS) for results and continuous assessment issues, Training Provider Monitoring System (TPMS) for accreditation of trainers, assessors and examiners as well as registration of training institutions.

Other services can be requested through the Help Desk (<https://www.teveta.org.zm/helpdesk/>), WhatsApp +260954590783, Facebook <http://facebook.com/TevetaZambia> and Twitter <https://twitter.com/TEVETAZM>.

TEVETA partnered with the National Council for Construction and Solwezi Trades Training Institute to design a training programme for small scale contractors in North Western Province to improve their skills and enhance their ability to effectively manage large construction projects. The training programme followed a training need assessment conducted in the province to identify skills gaps among contractors and their employees.

Furthermore, TEVETA collaborated with the Zambia Bureau of Standards, Zesco Ltd, Zambia Compulsory Standards Agency, Energy Regulation Board, Lusaka City Council and Engineering Institution of Zambia collaborated to develop the code of practice for wiring premises. The output of the code of wiring premises fed into TEVETA's process of revising the syllabus in electrical engineering for handymen., artisans and technologists. Each organisation in the collaborative work of developing the Code of Practice in Wiring Premises has a particular area of interest. TEVETA's interest is in training skilled human workforce in installation, maintenance and repairing electrical installations at domestic industrial levels. The Lusaka City Council is interested in compliance to building standards. The EIZ is interested in meeting requirements for licensing of practicing certificates by applicants while the Energy Regulation Board wants quality energy and electrical services.

We hope that you will enjoy reading this edition and we welcome contributions from our readers.

Government Commended for Apprenticeships, Internships and Industrial Attachments Framework

By TEVET Newswriter

Productive employment plays a central role in the economic and social integration of the youth. However, young people continue to face difficulties in transitioning into the labour market mainly due to skills mismatches and gaps that weaken their employability. In this regard, Government has launched a Work Based Learning (WBL) framework to enhance acquisition of skills required by the labour market. The framework was developed by line ministries, the International Labour Organisation (ILO) and other stakeholders to ensure TEVET and university graduates acquire appropriate skills that increase their employability in the world of work.

The objective of the framework is to advance economic and livelihoods development by establishing a robust, coordinated, effective, sustainable and relevance guidelines into education and training in relation to current circumstances and future national development trajectory. It links skills to

productivity, employment and development through coherence collaboration with ministries responsible for labour, youth and other line ministries, employers and workers' organisations and training providers.

During the launch of the framework, Minister of Higher Education, Dr. Brian Mushimba, highlighted the importance of quality training and skills to stimulate productivity and economic development the country aspires. Represented by the Permanent Secretary Kayula Siame, Dr. Mushimba said the youth faced challenges in finding employment and the work-based learning framework provided a system to gain industry experience and get absorbed in the job market smoothly.

"Skills provide opportunities for self-

employment and finding employment in the job market. Those without skills have more challenges in finding employment and run enterprises in the knowledge economy. The work-based learning framework offers an opportunity to acquire and formalise skills acquired both in the formal and informal sectors of the economy. Many young people will find spaces to work, earn income and acquire nationally recognised skills using the provisions of the framework. This will address skills mismatches through targeted skills



File picture: Mrs. Kayula Siame, Permanent Secretary, Ministry of Higher Education

training in workplaces."

The Minister said the framework provided requisite guidelines for effective development of skills required in the economy. The framework is also an interface between the Zambia Qualification Framework (ZQF) and workplace training in the formal and informal sectors including through apprenticeships, internships and industrial attachments.

"Government is already implementing some of work-based learning framework aspects such as TEVET Learnership, internships and ILO supported decent jobs for rural young people. The framework is an integral part of improved collaborations between industry and training institutions in developing quality and relevant skills in the country. It is a tool to

develop different skills the country requires to stimulate productivity and remain competitive. With the framework being launched, heads of different companies will be engaged over the implementation of different aspects of the work-based learning framework."

And ILO George Okutho said the organisation promotes access to education and skills training and smooth transition into the world of work in relation to the 7NDP, which seeks national transformation supported by productive

workforce to enhance productivity and competitiveness. "The issue of quality and relevance of education and skills training are important in improving employability of learners to narrow skills mismatch and gaps. The world of work is tremendously changing; thus, learners should acquire relevant soft skills that are critical in improving their employability. Soft skills are often not acquired in training institutions, that is where work-based learning comes in to

improve employability by according people soft skills more required in the world of work."

Dr. Okutho said the Work Based Learning required a legal framework and guidelines to implement apprenticeships, internships and other work-based learning pathways to ensure skills acquired in workplaces were recognised. "This framework provides guidelines on how the recognition of learning that happens in workplaces. Work-based learning will provide employers with young talent and trainees will have a feel of the world of work; a combination that makes workplaces more meaningful in skills development."

Meanwhile, Zambia Federation of Employers (ZFE) Vice President Myra Ngoma stated that the launch of WBL framework was actualising

the aspirations of employers (who are members of the federation) to improve collaboration between training and industry to narrow skills mismatches and gaps. Mr. Ngoma said the framework would improve the skills profile in the country by utilising apprenticeships, internships and industrial attachments for both learners and trainers (lecturers). "It provides for both lecturers and students having access to industry and addressing fragmentation in skills development. This collaboration is critical in quality and effective skills development in the country."

"The framework is a steppingstone in bridging the gap between the 1965 Apprenticeship Act to align it to the Work Based Learning Framework. ZFE is engaging its members on how to enhance apprenticeships. Companies that are members of the ZFE have presented issues that hinder them engage interns and apprentices. With the, work-based learning framework guidelines labour laws concerning the engagement in internships and apprenticeships will be harmonised.

The ZFE further felt the Skills Development Fund (SDF) can hasten the actualisation of the Work Based Learning Framework in many ways including providing incentives to companies that take on apprentices and interns."

Zambia Congress of Trade Union Deputy Secretary Elaston Ndlovu added that the framework was adding value to skills development as it would help address skills mismatches and gaps between training and industry. "Implementing guidelines of this framework will improve productivity and smooth transition into the world of work in line with changing labour market changes. Skills training should be linked to skills needs of sectors using systems such as the Work Based Learning Framework."

He said skills were cardinal in reducing family poverty and leading to quality jobs and wealth creation, hence the organisation was committed to providing labour market information that addresses employability among people who face serious challenges in finding jobs and business opportunities in the world of work.

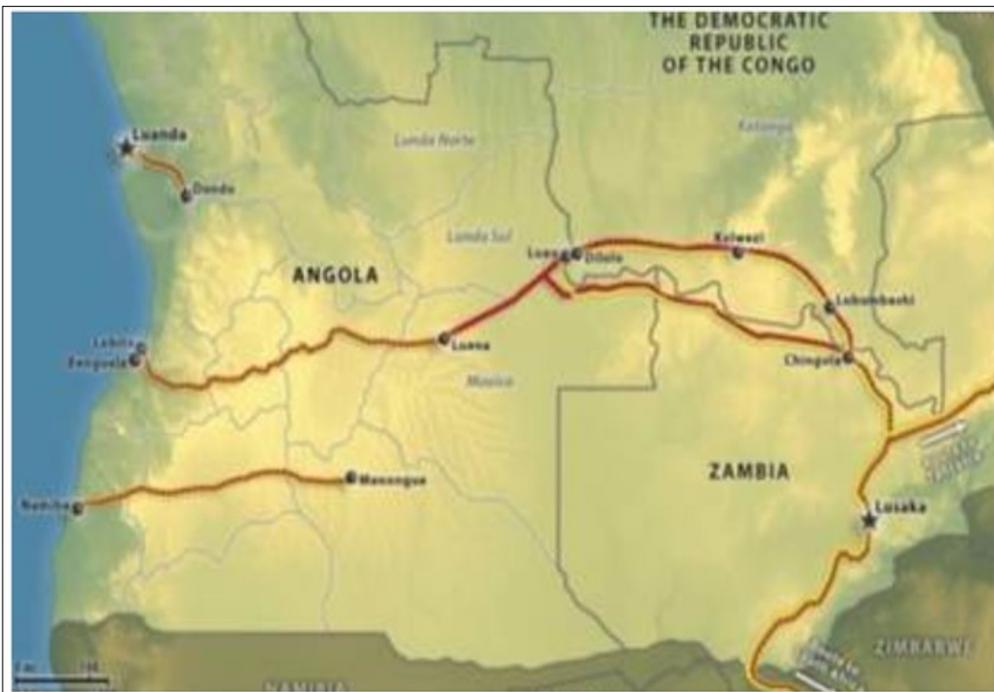
The work-based learning framework embeds key aspects consistency with the Seventh National Development Plan (7NDP) and Vision 2030 such as relevance and effectiveness of education and skills training. The framework provides collaborative platforms for different stakeholders in developing learning pathways that enhanced human capital and transition into the world of work.

It provides a basis to harness opportunities for quality skills and industrial attachments, apprenticeships, and internships. ILO provided financial and technical support in the development of the framework.

TEVETA collaborates with stakeholders to enhance contraction skills in North Western

By TEVET Newswriter

TEVETA in collaboration with the National Council for Construction (NCC) and Solwezi Trades Training Institute has designed a training programmes for small scale contractors in North Western Province to



The Corridor traverses Huambo, Benguela, Bei and Moxico provinces in Angola, four Provinces in The Democratic Republic of Congo namely Kantanga, Tanganyika, Lomami and Lualaba and Copperbelt and Northwestern provinces in Zambia.

improve their skills and enhance their ability to effectively manage large construction projects. The training programme followed a training need assessment conducted in the province to identify skills gaps among contractors and their employees.

The build capacity programme is part of the Lobito Corridor Project funded by African Development Bank. The identified skills gaps were factored in planning for training programmes coordinated by the NCC to enable contractors effectively participate in the Lobito Corridor Project. The project covers Zambia, Angola, and the Democratic Republic of Congo. The capacity building programme covers civil, electrical, and mechanical skills training based on the gaps identified during the training needs analysis.

The training need analysis was conducted in Solwezi (Kansashi and Lumwana mines), Kalumbila (Kalumbila mine), Mufumbwe, Manyinga, Kabompo, Zambezi, Chavuma and Mwinilunga. The analysis focused on identifying skills gaps of contractors, types and availability of material testing equipment, knowledge on methods of testing materials, assessing the capacity of Solwezi Trades to conduct training, and developing tailor-made programmes to address skills gaps.

The training needs analysis was done to ensure the capacity building programmes addressed specific skills needs of the construction sector rather than generic training. The training will enhance contractors' capacities to participate in large contractors in the Lobito Corridor. The construction sector contributes 27.5 % to the country's growth domestic product and posted an average growth rate of 17.5% in the past twelve years. It is forecast to expand by 4.3% in 2020. It continues to be among the top performing sectors that contribute largely to the economic growth of Zambia.

The construction sector is among them sectors that has been identified to have the greatest potential to achieve the objectives of promoting growth, employment and expanding Zambia's economic base. The other sectors are agriculture, tourism, and manufacturing. These sectors have the highest requirement for labour and the potential to be highly competitive. Developing appropriate skills for the construction sector in North Western province, which has increased mining activities is a strategic action to broaden the economic base of the area.

The \$8.1 million Lobito Corridor Project has funding towards purchasing of equipment, training aids and consultancy services needed by the contractors. The project is financed using a grant from the African Development Bank through the Ministry of Commerce Trade and Industry. Under the programme, three implementing agencies (TEVETA, NCC and Solwezi Trades Training Institute) targets to train 100 small scale enterprises in construction to enhance their capacity to participate in the value chains in the corridor including the mines.

The primary objective of the programme is to train contractors in various skills within the Lobito Corridor to reduce the skills gaps and enhance their quality of delivery in the construction industry.

The construction sector faces many challenges in Zambia. However, to address these challenges and create a sustainable solution, individuals and contractors involved in construction had to be trained and equipped with the skills that matched the prevailing technology on the market. The Lobito Corridor project became the vehicle to augment quality delivery in the sector.

The training needs analysis established that



the common challenge faced by many contractors in Zambia is limited capacity in managing large projects. Their lack of equipment, financial resources, personnel, and the lack of requisite knowledge to venture into certain construction projects limited them to effectively deliver on projects. These limitations resulted into failure to deliver projects on time, inappropriate costing, poor quality and failure to meet construction project scopes. Developing a relevant capacity building training programme was identified as one of the solutions to bridge the skills gap. The capacity building programme is targeted at contractors registered with the NCC, in grade 6 to 4 and based within the Lobito Corridor confinement. Solwezi Trades Training Institute will carry out the training.

The Lobito Corridor Project is contributing to Zambia's drive to become a land-linked and to position itself as a regional hub to produce value-added products for the regional and international market. The Project seeks to contribute to regional integration through the growth of domestic and cross-border trade, and poverty reduction through enhanced participation of MSMEs in value chains along the Corridor. This is in line with the Seventh National Development Plan (7NDP), which prioritizes the development of the Corridor. One of the outcomes of the 7NDP is "Improved Access to Domestic, Regional and International Markets."

Collaborative steps in developing skills for mining and transport sector

By TEVET Newswriter

Zambia has set a goal on job creation and diversifying the economy as articulated in the Seventh National Development Plan (7NDP) and Vision 2030. Key sectors to diversify job creation include agriculture, extractive industry, construction and transport industries. A skilled workforce is one of the main factors in the achievement of job and wealth creation aspirations. TEVET has been identified as a critical sector in actualising national development goals.

To support the Government initiatives to bolster youth employment in key sectors, the Zambian Industrial Training Academy (ZAMITA) was established in 2016. ZAMITA is focuses on enhancing the transport and heavy equipment sector by fostering systemic change in the development of a skilled workforce. ZAMITA is a centre of excellence meant to up-skill the workforce on the operations and maintenance of modern heavy equipment used in the mining industry and industries that are expected to grow as a

result of the mining industry growth such as construction and transport.

ZAMITA is a public-private development partnership that fosters systematic change within the vocational training system and increasing the supply of skilled heavy equipment engineering workforce. ZAMITA is aligned within the Northern Technical College (NORTEC) operations and has boosted its efforts in generating productive employment for young Zambian men and women by training youth in industrial skills relevant for the mining industry and related sectors thereby contributing to closing the skills gap that is currently plaguing Zambian industries.

More than six hundred (600) students have so far benefited from the ZAMITA public-private partnership. The partnership led to a 13% rise in female enrollment in technical and vocational programmes in mining, construction and transport sectors. Graduates of the academy have had a smooth transition in the extractive industries. ZAMITA also had engaged in rigorous staff development programme through which nine (9) members of staff went for specialised skills upgrade abroad on the new technology in the extractive industry under phase I. Overseas experts also visited NORTEC to deliver technology transfer sessions. The academy organised more than 38 staff development programmes since inception in 2016.

Due to the collaborative approach of the project, private sector involvement has been escalated and now NORTEC has several private sector partners on board. Among them are six (6) companies that signed agreements with the college to ensure constant supply of skilled human resource for attachments, employment and internship opportunities through the introduction and support of a career progression in transition into the world of work.

Government in partnership with the African Development Bank provided bursaries for two hundred sixty-three (263) beneficiaries to augment the public-private partnership under ZAMITA towards vocational training for mobile heavy equipment workforce in order to meet market demands. The strong national ownership of the ZAMITA initiative is valuable in developing relevant human resource in the country.

Recently, the Zambian Industrial Training Academy was expanded to serve the commercial transport sector workforce development on the Copperbelt. The managing partners of ZAMITA are the United Nations Industrial Development Organization (UNIDO), the Embassy of Sweden in Zambia, the Volvo Group and the Government of Zambia. The cooperating partners are supporting the initiative up to 2022. Under the transport sector, ZAMITA aims to boost the capacity of NORTEC through this multilateral public-private partnership programme to decrease the skills shortage in commercial transport sector.

By creating a link with Volvo's truck division for the purpose of a technology transfer, updating the curriculum, supplying the necessary infrastructure and staff development training, ZAMITA closes the skills gap and empower the youth in finding meaningful employment. In order to target the vulnerable and people affected by poverty, Government through the Ministry of Higher Education is implementing selective bursary distribution schemes with gender-specific elements. The Ministry has already committed to fund 500 beneficiaries over the next five years through the Skills Development Fund (SDF) as part of

their contribution to this project.

The launch and signing of the ZAMITA phase two projects from September 2019 to 2022 is an important step in skills development for young people in Zambia. Government expects from the partnership is inclusion of poor people, along value chains related to the Volvo Group's core business, get into gainful employment and production of consumables for the mining, construction and transport sectors as producers, distributors and entrepreneurs.

Volvo Group through ZAMITA has committed itself to adding value to the skills development by donating industrial



KGRTC training sessions

heavy equipment training aid for the institution to enable students have a practical learning experience. ZAMITA generally seeks to add value to the country's development processes by improving the social life of the citizenry in line with the 7NDP.

The public-private partnership through ZAMITA is cultivating interest among youthful leaders to acquire skills valuable to the development process taking place in the country. The benefit is to upgrade the skills capacity that adds value to the needs of the job market, let alone improving various industries. With mechanical engineering proving as one of the backbones of nation building, efforts promoting gender equality in heavy equipment engineering are essential by attracting women in the male dominated industrial professionals. For a long time, mining companies have complained that despite having local people with appropriate qualifications, many still lacked the required knowledge especially in modern mining technologies mining companies are adopting. The technological progress in various sectors is creating the need for new skills efficiency production of goods and supply of services.

Electrical Engineering Trainers up-skilled to improve training delivery

By TEVET Newswriter

The acquisition of modern equipment in the TEVET sector sometimes has not resulted into improved quality of training and skills. Lack of upskilling of trainers has contributed to this problem. Some trainers/lecturers are acquainted with old equipment they were using for teaching and were trained on and face difficulties in imparting hands-on skills using modern equipment. As a result, some trainers do not use the new training equipment for practical lessons in preference for old one they were familiar with. The situation negates Government actions towards making TEVET relevant in the attainment of national



Some of the electrical engineering training sessions

and personal aspirations.

The Ministry of Higher Education (MoHE) has procured training equipment for TEVET institutions for more than US\$10 million. Therefore, to keep trainers in the sector on top of training deliverables, they were upskilled through identified training institutions across the country. The first cohort of trainers in Electrical Engineering was sent to Kafue Gorge Regional Training Centre (KGRTC). The regional training centre is among the training institutions that has received the state-of-art training equipment from MoHE. The centre received training equipment worth K5.5 million brought using proceeds from the Skills Development Fund (SDF).

The training equipment is for skills centres, trades training institutes and colleges offering TEVET in the country. Recapitalising TEVET is resonating with the Seventh National Development (7NDP), which recognises TEVET as an integral part to inclusive economic development, citizen empowerment and key to informal sector productivity and formalisation to broaden the country's tax base. The 7NDP also prioritises job and employment creation through addressing skills shortages and issues of youth unemployment. It is envisaged that TEVET financing would enhance employability of young people using hands-on and entrepreneurship skillsets.

The demand from industry for the TEVET sector to scale-up its efficiency in developing relevant skilled persons to ensure the nation had the quantity and quality of TEVET skills required to foster national development has been increasing over the years. The demand includes skills covering manufacturing, agri-

cultural and value addition to agricultural commodities, community, business related, hospitality, development and engineering. The demands are in line with national and personal aspirations to attain the middle-income status and improve living conditions among households.

Power generation is central to national development. With current climatic conditions affecting the generation of power, upskilling trainers is important to keep them abreast with emerging alternative sources of energy and know the kind of skills required to develop relevant workforce to manage the generation and distribution of alternative energy sources.

Zambia's goal to diversify energy generation and transmission requires adequate and relevant skills and modern training equipment actualise it. Productivity at small and large scale is enhanced with efficient diversified energy provision to avoid production disruptions resulting from power supplying rationing. As a key player in development quality skills in energy generation, transmission and supply, Kafue Gorge Regional Training Centre is one the training providers that is receiving equipment the Ministry of Higher Education is acquiring for training institutions in the TEVET sector.

Some the laboratory equipment provides quality training for operations of medium-voltage and high-outage networks. The laboratory equipment has been incorporated cutting-edge digital technology, industrial safety, and monitoring of protective features by means of supervisory control and data acquisition (SCADA). The equipment is electrical

generation and distribution is in line with the high demand for power and the need for alternative sources of energy. Power outages affect many sectors of the economy, and training citizens in alternative power sources can help avert the problem in line with climate change complexities toward adequate hydro power supply in the country and region. Alternative sources of energy that require adequate skills for them to substantially contribute to the energy mix include solar power installation, solar panel assembly and repair. Other sources that require long term skilled human capital are wind energy and smart cooking solutions to reduce cutting of trees for charcoal burning.

In line with the 7NDP, Zambia remains committed to the socio-economic development of the country including alternative energy provision. Demand for electricity in the country is high but hydro power generation cannot meet the demand resulting into power rationing. The situation has been exacerbated by effects of climate change on the availability of water since Zambia is highly dependent on hydropower. The current projections indicate that growth in demand for power will increase from 150 MW to 200 MW per annum. The peak demand for electricity in the country is projected at 3,000 MW by 2020. It is envisaged that other sources of energy which included solar would grow to about 15 percent by 2030. To increase supply, there was need for additional investment in energy mix particularly solar energy which is quite abundant.

Proceeds from the Skills Development Fund are used for upskilling trainers under capacity building financing pillar to ensure that the new equipment being procured for the sector resulted into improved quality TEVET. The long-term objective of the upskilling programme is to ensure trainer's efficiency to training delivery using state-of-the-art equipment, relevance of TEVET and quality of the skills being imparted in relation to industry needs. Improved quality and relevance of TEVET broadens skilled persons' economic opportunities and ease their transition into the world of work. The upskilling programme is meant to ensure hands-on skills were imparted on trainers to efficiently use new equipment after it has been commissioned in skills centre, trades institutes and colleges. Other trainers in different programmes will be upskilled at identified training institutions. Others will be upskilled by suppliers of the equipment as part of the commissioning of equipment in TEVET.

NORTEC hones earth moving equipment skill

By Martin Nyirenda

Empowering young people with market-driven skills makes economic sense. More so, a rapidly changing global economy increasingly requires workers to develop problem-solving, leadership, and technical skills. World Bank calculations show that one third of the working age population in low and middle-income countries lacks the basic skills required to get quality jobs. Yet most of them are still missing cognitive skills.

Untrained youthful workers often take up low-paying jobs which provide limited career growth, cut labour force productivity and short-circuit economic investment.

An unskilled workforce fails to sustain the private sector, which highlights the fact that skills development cannot be separated from the importance of access to quality education. It is against this background that the Northern Technical College (NORTEC) has been churning out graduates to suit the current skill demands of the heavy earth moving machinery sector, as the technology in these machines has evolved to more complex electrohydraulic controls with the integration of the microprocessor. NORTEC has come handy in the sector that has long been grappling to find a qualified workforce that is competent enough in these modern computer controlled technologies.

NORTEC being a self-financing vocational institution running with an operational deficit, it is near impossible to find resources to revamp its programme to match the current industry skill demands. Through the support of the Ministry of Higher Education (MoHE), NORTEC has become the local implementing partner for one of the United Nations Industrial Development Organizations (UNIDO) under the Public Private Partnership (PPP) skills development programme which was launched in 2015.

The skills level of members of society has a direct and measurable impact on the efficiency and profitability of the country as a whole. This is the reason a multi-lateral cooperation partnership was signed between the Ministry of Higher Education, UNIDO, Swedish em-

bassy in Lusaka and the Volvo Group from Sweden to ensure that NORTEC offers improved essential skills in the workplace to help economic industries improve performance accuracy and quality, among others. The partners pledged to work together to ensure that NORTEC was transformed into a state-of-the-art centre of excellence on heavy equipment engineering. NORTEC attracts more than 50 per cent of its annual student enrollment into the heavy equipment department, hence the partners agreed to help the youths of Zambia by establishing a specialised academy called Zambian Industrial Training Academy (ZAMITA).

Until the end of 2018, the ZAMITA academy successfully enrolled more than 680 students and engaged in a partnership with many private sector companies to offer internship and employment to the academy graduates. While the academy was able to place most of its graduates from diploma level, it faced difficulties in placing artisans into the job market. Most of its artisans end up in either small and medium enterprises (SMEs) or the informal sector which is very vulnerable to economic boom-bust cycles.

The academy pledged to work more closely with the Ministry of Higher Education and TEVETA to improve support for the artisans getting placed in the job market. Among the many successful graduates who have man-

studied and graduated with a diploma in Heavy Equipment Engineering under the ZAMITA programme at NORTEC. Mr Chikumbi has since found his dream job. He is now working as a mechanic for MacMahon in Australia. Through an interview via video call, Mr Chikumbi explained what inspired him to fall in love with heavy equipment engineering. "My father was a major source of inspiration. "I used to admire his work when he was pulling things apart and making them work and that made me to develop interest in the field of mechanics," he said.

Asked what he could say about the modern equipment he was exposed to at NORTEC, Mr Chikumbi said; "The equipment is very good and almost the same standard with those found in the industry. "Here in the first world countries, I didn't face a lot of challenges because of the equipment I was exposed to at NORTEC," he said.

He described the equipment at NORTEC as fascinating. He said the equipment gives students a firm foundation for the future. "I got many skills from my training but one that stands out for me is electrical fault diagnosis and rectification and I am able to repair any equipment using electrohydraulic and electro-pneumatic systems," Mr Chikumbi said. He said the training programme at NORTEC has given him a very strong base to maintain his relevance in the industry.



Danford Matalee
ZAMITA Alumnus/Batch 2

Currently working for First Quantum Minerals (FQM)

"The most **rewarding** part of my **job** is that it gives me **confidence** showing **competence** which is an excellent **reward** thanks to the skills & Knowledge I acquired from **ZAMITA**."



aged to improve their welfare after obtaining the market driven skills is Mwenda Chikumbi who joined the industry after completing studies in heavy equipment repair technician programme at NORTEC.

Mr Chikumbi said after he acquired experience in the industry, he decided to further his

Mr Chikumbi said in this day and age, the machinery has advanced as the electrical part has been mostly incorporated. "So, if a mechanic doesn't have that electrical knowledge, it will be hard to prove his relevance in the industry. "That skill has been the major benefit for me from ZAMITA, even here in Australia, it is really helping," he said.



Bright Kwabe
ZAMITA Alumnus/Batch 4

Currently working for First Quantum Minerals (FQM), Zambia.

"One of the most **rewarding** things about my Job in heavy equipment is **fault finding** I really do enjoy it and with the training gotten through ZAMITA it has given me **competence** and **courage**.

Thanks to ZAMITA I can confidently work on Electrical, Pneumatic and Hydraulic Systems with ease on a machine because I Know exactly what I'm doing."



Today you find that cylinders have failed, you have to diagnose to know why they failed; while tomorrow, you have to work on injectors and this is quite interesting. "Everyday you meet different challenges and that keeps me going," he said.

Mr Mukupa also said students should not expect too much from the industry but should be open-Minded. "As you graduate, you should know that it is quite a long journey that was ahead and this is why some graduates face rejection when they enter in the industry which is busy looking for more experienced candidates," he said.

He said ZAMITA did well to initiate training programmes. He said he is lucky that he is one of the first beneficiaries to graduate under the programme. He urged ZAMITA to introduce its programme to other TEVET colleges so that more people can have the opportunity to benefit from the programme.

Nathan Mponde, who now works as a technician for Sandvik Zambia Mining Limited, says it feels great to be part of the ZAMITA programme as it offers great employment and career opportunities. "What I enjoyed most about the training at NORTEC is the modern equipment they have. "One is able to relate to what students are actually training on and what is applied in industry," he said. He advised youths to consider undertaking such programmes even as Zambia seeks to set a benchmark of 50-50 chance for males and females working in the industry.

He said training at NORTEC is a great opportunity because he is now able to work at Sandvik Zambia, a reputable firm which is a global company where he is exposed to a lot of things that can work anywhere else. Mr Mponde said the programme at NORTEC has attracted massive attention from industry players with Volvo Group bringing in Volvo Trucks Southern Africa to empower the workforce with appropriate skills. Marcus Horberg, the Volvo Trucks Southern Africa chief executive officer facilitated the free training of more than 10 NORTEC teaching staff members at his regional technical training center twice last year. The staff also completed two training programmes in 2020 before the lockdown due to the outbreak of Covid19.

Mr Horberg also agreed to extend further support by allowing the teaching staff to work

Asked how his experience acquired from NORTEC prepared him for employment, Mr Chikumbi said studying at NORTEC equipped him with the knowledge and skills needed to succeed in his career.

He said the fact that he obtained a combination of skills in hydraulics, mechanical and electrical system from a recognized educational institution certainly helped to place him in the job market. He said the most rewarding or enjoyable part of his job is tackling challenges and fixing broken machines and making them available for production. "That gives me a sense of fulfillment. It is an incredible feeling to see that I am making a positive impact on the company," he said. He recalled how one day he was given an opportunity to fix a D10T dozer. He said he had to follow the trouble shooting procedure that he learnt from NORTEC and he found out that one of the solenoids on the brake valve was defective and out of limit. So after replacing it, the machine functioned and it is still running up to now. Mr Chikumbi encouraged students pursuing mechanics to have the willingness to learn. He advised students to have a never-say-die attitude.

Her said a student should be a team player. "Whoever possesses these traits will go places in life. "For female students, in this industry there is nothing like male or female. "Women are doing great things, amazing things that even male counterparts can't do," he said. He urged the female students not to feel intimidated or inferior. "You can go places as long as you are a team player," he said.

Mr Chikumbi said ZAMITA has bridged the gap that existed between training institutions and industry in that it is building a strong

foundation by exposing learners to latest technology. He said a few years back before ZAMITA, students used to train on old machinery and equipment but ZAMITA has come in with modern equipment that is found in the industry at the moment.

He said ZAMITA is doing a great a job and he believes that whoever passes through ZAMITA will never fail in the industry. "Thank you to everyone who played a role in my training, you are my heroes and may God bless you for the good job that you did," Mr Chikumbi said.

Chilufya Mukupa, a graduate of ZAMITA's heavy equipment engineering programme at NORTEC, works for Kalumbila Minerals, a Zambian subsidiary of Canadian mining company, First Quantum Minerals. "I did my diploma in heavy equipment engineering under ZAMITA. "There is an incredible improvement in terms of equipment, facilitation, and trainers," Mr Mukupa said. He said the situation at NORTEC is different from the way it was before ZAMITA was established. Mr Mukupa said there has been a good investment that has facilitated this training programme and he was benefiting.

"One of the things I appreciate most is the electronic part, because nowadays there is diversification going on so you find that the manufacturers of equipment are moving away from the mechanical part of everything, it is all electronic. "The experience I had training under ZAMITA exposed me to the electronic systems," Mr Mukupa said. Mr Mukupa said his job was challenging and not boring. He said his job is different from other careers because a person does not get to do the same things over and over again. "

in the company's maintenance centers to gain hands-on skills. He also pledged to continue his contribution to ZAMITA until 2022. The contributions mainly consist of supply of modern training equipment, engaging the teaching staff with Volvo South Africa training center to develop competencies on the supplied modern machinery through various staff development initiatives. Altogether the Volvo contribution to the ZAMITA is valued at US\$955,554. So far, NORTEC has received US\$177,360.42 worth of training items including a dump truck with modern electronic controls and euro emission standards.

NORTEC has since promised to engage more than 10 other vocational colleges to train their teachers on the modern heavy equipment curricula and share the modern engines and transmissions with other technical colleges through an initiative which the Ministry of Higher Education is funding in order to transform all the vocational colleges to the level of NORTEC. The Ministry of Higher Education through TEVETA is extending the Skills Development Fund to revive the automotive curricula and to scale up the heavy equipment engineering across Zambia's Vocational Training Centres (VTCs). Government's commitment to strengthen the VTC's will, no doubt, power more private sector players in the country to benefit from industry driven-skills offered by NORTEC.

Syllabus for electrical programmes revised in line with new code of practice for wiring premises

By TEVET Newswriter

In Zambia, the demand for qualified electrical handymen is quite immense. This is due to economic, social and technological changes that have not spared the electrical industry. Recent increases in industrial and commercial activities in the nation have also led to a rise in demand for qualified electrical handymen who are able to strictly adhere to the Zambia Code of Practice for wiring of premises in designing, selection, erection, inspection and testing of electrical installations.

Therefore, ensuring safety of persons, livestock and property against dangers and damage arising from poorly done electrical installations, which could hinder appropriate functioning of electrical installations. It is against this background that Electrical Engineering programme for handymen has been revised to meet the new demands in the industry. TEVETA, Zambia Bureau of Standards, Zesco Ltd, Zambia Compulsory Standards Agency, Energy Regulation Board, Lusaka City Council and Engineering Institution of Zambia collaborated to develop the code of practice for wiring premises. The output of the code of wiring premises fed into TEVETA's process of revising the syllabus in electrical engineering for handymen., artisans and technologists.

The revision was aimed at providing the nation with qualified electrical persons who apply the skills to meet the high demand in both formal and informal sectors of the electrical industry. The revised programme in electrical engineering would provide handymen with knowledge, skills and appropriate attitudes to install, maintain and repair domestic and industrial electrical machinery and equipment competently in line with the Zambian Standards of Wiring of Premises-Code of Practice.

ZESCO limited recently issued new house wiring and installation requirements that should be met before connection of power to family houses and small commercial structures that require power not exceeding 15k VA. The regulations include the requirement for the electrician to attach registration certificate from the Engineering Institution of Zambia (EIZ) and a compliance test certificate from the person who inspected and tested the installation. These requirements became into effective on March 1, 2020.

These measures are meant to minimise electrical accidents (shocks, burns and fires) arising from substandard electrical wiring of houses. The measures are also aimed at ensuring safety and proper functioning of installations. Most house owners engage unqualified, poorly skilled or uncertified electricians to wire their houses. Their poor workmanship results into houses catching fires. With the new rules on house wiring, TEVETA and EIZ and Zesco Limited have been working together to identify new skills electricians require in line with the new installation requirements by Zesco. Up-skilling programmes for electricians to meet the new

requirements will be designed and implemented by different players in the power supply and consumption value chain.

TEVETA is using the collaboration with other organisations in the development of the Code of Practice in Wiring Premises to include new skills in the curriculum for electrical engineering for handymen, technicians and technologists. Among the roles of TEVETA is to develop and review curriculum, develop test and assessment instruments to assess the competence of the learners in each technical and vocational programmes. These are developed in consultation with industry to ensure the relevance of skills being churned out into the labour market. Whenever industry signals skills gaps or emerging skills, TEVETA coordinates the development of training programmes to supply new skills or review old curriculum to add new skills in an occupation. Electrical programmes were candidates to the review process to meet industry needs in domestic wiring and installation.

Each organisation in the collaborative work of developing the Code of Practice in Wiring Premises has a particular area of interest. TEVETA's interest is in training skilled human workforce in installation, maintenance and repairing electrical installations at domestic industrial levels. The Lusaka City Council is interested in compliance to building standards. The EIZ is interested in meeting requirements for licensing of practicing certificates by applicants while the Energy Regulation Board wants quality energy and electrical services.

This is the first time the country is developing the Code of Practice in house wiring. In the past, electricians used different standards. Some electricians used South African and British standards or Institute of Electrical Engineers (IEE) ones. The country is now standardising electrical installations by developing a Code of Practice for wiring premises. The multi-agency collaboration brought different regulatory, standards and practice requirements in the Code of Practice. Some of the standards included in the Code of Practice include positioning of sockets from the ground to avoid electrocutions of people, especially during floods.

The Code Practice entails up-skilling trainers in electrical engineering to ensure they know code of practice and deliver lessons in line with what was prescribed in the Code of

Practice, especially practical lessons on wiring premises.

Vital TEVETA links while keeping physical distance

In view of the coronavirus (COVID-19) pandemic and as guided by the Ministry of Health on physical distancing and avoiding crowds to prevent the spread of COVID-19, we have changed the way we provide services to our esteemed clients and engaging stakeholders. We have (temporarily) suspended walk-in services at our offices until we get further guidance by the Ministry of Health. Online systems will be utilized to access different services from us.

Examination related services are accessible on the Learner Data Management System (LDMS). The LDMS provides for training institutions to enroll students and upload student continuous assessments online. Students can also view their results and continuous assessments on the LDMS. The LDMS is accessible via <https://www.teveta.org.zm/ldms/#/>.

Applications for accreditation as a training institution, trainers, assessors and examiners can be done using the Training Provider Monitoring System (TPMS). The TPMS is a tool designed to capture information regarding to accreditation and certification of Trainers, Assessors, Examiners and registration of TEVET institutions. The system also includes online accreditation application feature that allows trainers, examiners and assessors to view their accreditation status. The TPMS is accessible on <https://www.teveta.org.zm/apply>.

Technical Education and Vocational Education Training (TEVET) Fund related queries

can be made through WhatsApp: +260954590783 Email: teveta-cnyiren-hntanku-fund@teveta.org.zm; da@teveta.org.zm; la@teveta.org.zm.

The TEVET Fund plays an important role in assisting the development of quality, sustainable, demand-driven, and equitable TEVET system. The Fund establishes a financing platform that purchases training services from TEVET providers, on a competitive basis, for skills development in both the formal and informal sectors of the economy.

Other services can be requested through the Help Desk (<https://www.teveta.org.zm/helpdesk/>), WhatsApp +260954590783, Facebook <http://facebook.com/TevetaZambia> and Twitter <https://twitter.com/TEVETAZM>.

Applications forms for registration as a training institution and student query forms can be downloaded on <https://www.teveta.org.zm/downloads/>. Bank details for different types of payment can be requested through WhatsApp +260954590783.

holders in the TEVET sector can use this platform to formerly send queries to TEVETA. The Help Desk System user guide is downloadable from www.teveta.org.zm. Other windows are accessible under navigation or applications on the website.

The online systems are meant to be a more reliable and accountable means of communication between the public and TEVETA. To see it that no query goes unattended to the Helpdesk system was designed for the public to submit their issues officially and in a proper manner to TEVETA. The submitted queries do not only go answered to but also can later be used as reference to improve on service delivery of the institution.

Examination frameworks, examination timetables, timelines for enrolments, examination entries, paying examination fees, continuous assessments uploading deadlines and dates for publishing continuous assessments and release of results are accessible on www.teveta.org.zm. Broadly, TEVETA is seeking ways of easing the cost of doing business using tailor-made management information systems. The management information systems are both computer and mobile phone compatible for usability by clients on different gadgets.

Priority areas of the management information systems are capture learner enrollments, learner demographics, learner progression rate, and learner graduation quantities and failure rate in the technical and vocational education training system.

The systems also focus on tracer studies/learner employability analysis, assess relevance of the training, and staff demographics and ratio in relation to learners and trainers. Such insightful data is

valuable in improving quality of TEVET, decision and policy making and sector financing to narrow skills gaps and mismatches. The management information systems are a robust information system that provides necessary information and feedback from stakeholders to ensure relevance of curriculum and industry responsive training.



Public and students to follow laid out measures in order to reduce the spread of

Help Desk System is an application that provides with information and support relation to TEVETA's products and services. It provides a point of contact to gain assistance over TEVETA products and services, get answers to questions and solve known problems. Training institutions, learners and other stake-