



- **TEVETA assesses Muchinga Welders Association Members in different skills**
- **Synopsis of the 2018 budget: Education and Skills Development**

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TEVET NEWS

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Foreword



Welcome to the third quarter of the 2017 TEVET Newsletter. In the quarter, TEVETA assessed 28 members of Muchinga Welders Association in Carpentry and Joinery, Metal Fabrication and Bricklaying under Recognition of Prior Learning (RPL). Twelve (12) were assessed under Trade Test Level 2 and sixteen (16) under Trade Test Level 3. RPL is a process by which individuals can claim and gain recognition towards specific national qualifications based on demonstrated learning that occurred at some time in the past. It recognises knowledge, skills and attitudes that have been acquired in other forms of learning that were not certified.

In the quarter, the 2018 national budget was presented by the Minister of Finance with a re-emphasis on the importance of education and skills development to ensure a high quality labour force that is necessary to foster development. The budgetary message with regard to skills development from secondary schools to TEVET, highlighted government commitment towards the implementation of the two-tier system which offers learners the opportunity to follow an academic or vocational career path way.

Furthermore, TEVETA separated with the Director General David Chakonta and Cleophas Takaiza became the care-taker Director General until the time a new Director General is appointed. Mr. Takaiza worked with TEVETA for 13 years starting as Liaison Officer to Director Training Standards until July 2017 when he joined Zambia Qualifications Authority (ZAQA) as Deputy Director - Technical. Additionally, the newsletter provides analyses of the TEVET sector in relation to national visions such as the Seventh National Development Plan are provided.

We hope that you enjoy reading this edition and we welcome contributions.

TEVETA assesses Muchinga Welders Association Members in different skills

By TEVET Newswriter



Bricklaying Muchinga Welders Association members during the Recognition of Prior Learning assessments in Nakonde

As part of the 2017 World Youth Skills Day commemoration, TEVETA assessed 28 members of Muchinga Welders Association in Carpentry and Joinery, Metal Fabrication and Bricklaying under Recognition of Prior Learning (RPL). Twelve (12) were assessed under Trade Test Level 2 and sixteen (16) under Trade Test Level 3. Speaking on the sidelines of the assessments, former TEVETA Director General David Chakonta said the Authority in collaboration with Muchinga Welders Association was grooming critical thinkers who could interrogate information, analyse data and identify problems and solutions in Nakonde. Mr. Chakonta added that TEVETA was a connector or link of the

education and skills development system preparing individuals for qualifications. The Authority's vision is to have a "world class technical education, vocational and entrepreneurship training (TEVET) system that drives skills empowerment for sustainable development." This was achievable through the development and supply of internationally competitive skills persons to the Zambian labour market.

The link with Muchinga province emerged from the TEVETA mandate and vision to increase access to TEVET using different training pathways. The training pathways include recognition of learning that happens informally at

places of work and other learning opportunities where learners acquire long time experiential learning.. The collaboration between TEVETA and the Association was initiated by the leaders of the Association who expressed the desire to have their members (welders, carpenters and bricklayers) assessed and certified. The RPL assessments conducted from 14th to 15th June 2017 in Nakonde District.

Most members of the association learnt through informal apprenticeships. One of the Muchinga Welders' Association leaders' Lawrence Sichalwe said the association's mission was to have adequate skills to win contracts and benefit from the

booming construction sector. "In this way, we may create jobs since the province has many opportunities that we can capitalise on to improve the economic status of the area."

How they learnt the skills?

Lawrence Sicalwe said he learnt from his uncle. Another member of the association, Paul Sikanyika said "when I finished school, my aunt advised me to join someone who had a metal work workshop. I started learning step by step starting with cutting, to welding. I started welding after two years. When my boss' workshop folded up, I looked for those who had workshops, and pay for workshop usage. Joseph Banda Tonga organised us to form an association." Others said they learnt from Mr. Tonga.

Initially, contractors used to get welders, bricklayers and carpenters from outside Nakonde such as Lusaka, Kasama or Copperbelt. The community lost out. "We felt working as an association we would have the muscle to bid and find technical/ financial assistance. We once applied for a grant at Lukanshya Trades Training Institute. But we were told we needed TEVETA certificates. That is when we sought TEVETA's engagement to have our members certified" said Mr. Tonga, the association president. "We've children. We need a place where they can learn some skills to utilise in their lives. But we tell them, pursue the academic pathway as you learn skills. Don't be excited by small moneys you are getting when you come on the workshop to make something for a client" added Mr. Tonga.

Lawrence Banda, one of the carpenters said he learnt from friends who knew carpentry work by doing smaller tasks until they had their own carpentry workshops. "I used to buy tools one by one. I started by borrowing from friends whenever I found someone who needed carpentry work done for them."

Mr. Tonga said "I came to Muchinga after seeing the increase in numbers

of welders in Lusaka where I was living. But to improve levels of welding, I thought an association would be a platform to get things moving in sharpening our skills. We registered with Registrar of Associations, Zambia Revenue Authority, and Zambia Public Procurement Authority as per law and to quality for government tenders." The association also has members in Isoka and Chinsali. He said the association once applied for a grant under ministry of Youth and Sport. But the ministry advised "us that we need TEVETA certificates. We then went to Lukanshya Training Trades with a possibility to have the institution's trainers assigned to our association so that we can be certified. People want skills around but fail to go to college. But with open learning, others can join the association and learn a skill. Our learning platform is flexible and work based."

Nakonde has many opportunities. But without certified skills "we get stuck in getting government contractors or do works". Having TEVETA coming into the picture, it is dream come true in skilling people in rural provinces like ours. "We're not limiting ourselves to welders, bricklayers and carpenters; we're seeking to embrace all skills" hinted Mr. Tonga. He further said work culture among members was a problem. "Many of them are less committed compared to Tanzanians. The habit of wanting to do things alone is making us lose out business opportunities. For example, a Tanzanian will win a contract and bring other bricklayers to finish a contract on time. But us we would rather do it alone, waste the owner's time and lose out business, other opportunities as we hold on to one contract over time and business confidence."

Bricklayers assessed were groups of family members with several years of experience. Some of them started job-on training in 1987. Thus, the association's skill profile is rich with an assortment of abilities. "When you learn from someone, there's a risk of inheriting their ways

of doing things be it inefficiencies in time management, wastage of materials, poor quality of products/ services or safety in the workshop. We felt coming together as an association will be complementary. We'll learn from each other on how to do quality work or produce quality products. We want our members to do things differently for them to be competitive, especially that there's high competition from Tanzanian artisans and technicians. For us engaging TEVETA was one way of bringing quality standards and seeking improvement in our workshop practices, quality of products and efficiency."

Meanwhile Muchinga Province Permanent Secretary (PS) Bright Nundwe said there were many projects that did not need foreigners to do them. But the "question is: what do you've in your hands to earn a living? It is important to be financially disciplined. So when you earn extra income, don't misuse it. Reinvest it"

Mr. Nundwe urged association members to make a profile of their members. "I want to let know the vision of Muchinga province. We've a lot of abilities that we should utilise to grow the province. Government will help you. Muchinga has 3 more districts; I will ensure that you participate in the growth of the districts."

"Take advantage of this border, invest in ware houses, logistics and other emerging business opportunities that being close to the border brings. Make big workshops that can produce and export things to our neighbouring countries. Your attitude and behaviour is important in business. Be prudent in managing your earns from your businesses. Open up bank accounts and reinvest your money. Diversifying the economy requires multiple skills and mindsets to achieve it. Muchinga receives adequate rains every year; we need to position ourselves where we'll be drivers of the diversification mission. Let's be practical and think outside the box in capturing opportunities around the area."

Synopsis of the 2018 budget: Education and Skills Development

By TEVET Newswriter

The Ministry of Finance has allocated K11.6 billion on education and skills development to facilitate spending on, among others, infrastructure development, student loans, teacher recruitment and procurement of school requisites.

Speaking during the 2018 budget presentation to Parliament, Minister of Finance Felix Mutati said education and skills development were vital to ensure a high quality labour force that is necessary to foster development. "In this regard, the focus of Government is to ensure increased access to quality education at all levels. This will be achieved by focusing on construction and rehabilitation of education facilities at all levels, provision of equipment and learning materials, recruitment of teachers and creating sustainable financing mechanisms for higher learning institutions."

As part of the long term financing solution for Technical Education, Vocational and Entrepreneurship Training (TEVET), government this year established a Skills Development Fund. As at end of August

2017, a total of K105.4 million was raised through the Skills Development Levy. With regard to secondary education, government will focus on the implementation of the two-tier system which offers learners the opportunity to follow an academic or vocational career path way.

The skills training levy is envisaged to accelerate the implementation of the 2030 Vision by financing skills assessment infrastructure to facilitate assessment and certification of higher numbers of learners in TEVET annually. Both government and the private sector have highlighted a serious shortage of various skills in the different sectors in the country. Thus, the levy is seen to provide a stable financing required in building and maintaining skills institutional capacity to realise wealth and job creation.

Government in 2018 will continue with the construction of universities, and university colleges specialised in the fields of science, technology, mathematics and performing arts. Further, government is committed to

construction of ongoing infrastructure and equipping of TEVET institutions.

Enhancing Human Development

Human development plays a critical role in promoting inclusive growth and laying a foundation for future prosperity. The Seventh National Development Plan identifies three key components of human development namely health, education and skills development and improved access to water supply and sanitation. In 2018 the focus in the primary education subsector will be to continue increasing access to, and improving quality of primary education. Infrastructure development in the primary education sub-sector will focus on completion of schools under construction and rehabilitation of classrooms.

With regard to secondary education, Government will focus on the implementation of the two-tier system which offers learners the opportunity to follow an academic or vocational career path way. The budget theme is "Accelerating fiscal fitness for sustained inclusive growth, without leaving anyone behind"

Going beyond Tailoring: Chodort Training Centre meeting girls' sanitary needs

By TEVET Newswriter

Chodort Training Centre went outside the box to Design, Cutting and Tailoring by adding making feminine hygiene kits that could last two to three years. Centre Manager Jenny Featherstone said two weeks was added to the 3 months training window under TEVET financing to include "specialist tailoring of girls' sanitary pads that use special washable material with long lasting usage of 2-3 years per kit".

The addition to the content coverage offers learners a niche market in design, cutting and tailoring in making feminine hygiene kits that would help girls to access education without feminine disruptions.

The hygiene kits are usable for rural areas where sanitary pads are inaccessible either because of lack of supply or girls' inability to buy them monthly due to financial reasons. "These are less costly, but reusable hence provides a niche market for the women

as they will be able to make something different from others doing tailoring on the market" argued Ms. Featherstone.

Limited access to safe sanitary products constrained school attendance by girls, forcing some girls to drop out of school. Washable, reusable pads seemed the solution. The learners in design, cutting and tailoring will begin sewing feminine hygiene kits. The kits are known as days for girls. Each kit contains a pair of underpants and a thin shield with a water resistant polyurethane liner that snaps under the panties so that it does not shift forward. It also contains eight flannels, tri-fold reusable pads that can be layered as necessary.

Furthermore, a washcloth, and bar of soap for cleaning purposes are included to the kit. Every girl and woman has inherent worth and dignity; thus these kits are providing sustainable feminine hygiene solutions and health education for the girl child both in urban and rural



One of the feminine hygiene pads Chodort is teaching learners to make

area. When girls and women have health, education, and opportunity, communities and the world are stronger.

Some of the kits "we made with the previous group were donated to women in prison in Choma. We are looking at how we can design and tailor products that meet people's critical needs such as feminine hygiene needs which government prioritised in the 2017 national budget as one of the ways to ease girls' life in school," added the Centre Manager.

China Geo donates K100, 000 to World Skills Zambia

By TEVET Newswriter



PS Mushota and China Geo Engineering representatives during the handover of the K100, 000 cheque towards 44th Skills Competition in Abu Dhabi

China Geo Engineering donated K100,000.00 towards Zambia's participation at the 44th World Skills championship in Abu Dhabi from October 14-18 2017. WorldSkills International (WSI) is an organisation established in 1950. It has 77 member states. Its Vision and Mission respectively are: *"Improving our world with the power of skills"* and *"To raise the profile and recognition of skilled people, and show how important skills are achieving economic growth and personal success."* Zambia joined WorldSkills International in September 2014. The motivation was TEVETA's Vision for Zambia which is: *"A world class Technical Education, Vocational and Entrepreneurship Training (TEVET) system that drives skills empowerment for sustainable development."*

The objective of Zambia's participation in technical and/or entrepreneurship international skills competitions is to accomplish the following among other things: i) facilitate practical technology transfer training through participating learners and experts, as well as related Continuing Professional Development (CPD) for trainers and skilled professionals practicing in industry both directly, and

indirectly through post international competition activities; ii) expose and challenge TEVET learners to aspire for the *international skills excellence standards* of WorldSkills International, and thereby raise their potential for viable future careers as top notch performing salaried workers or employees and/ or internationally competitive Entrepreneurs/Employers; and iii) policy and/or technical level benchmarking of the Zambian TEVET system with those of the other 76 member states or regions of WorldSkills International.

Speaking during the handover of the cheque, Permanent Secretary (PS) in the Ministry of Higher Education Owen Mgemzulu who spoke through Director Vocational Education and Training (DVET) Mr. Alex Simumba said quality of skills could be enhanced through skills competitions where Zambian skills frameworks and training could be benchmarked to reflect international standards. He added that with the two tier system in place, bringing quality skills requires multifaceted approaches that reduce inequality, skills gaps and access to TEVET.

"We cannot talk of industrialisation

without quality skills that make us competitive. Our quality of products and services should be internationally competitive to benefit from global standards. Industry has to be engaged to realise real skills the labour market requires in terms of skills, attributes and attitudes," the PS said.

Meanwhile, PS Ministry of Housing and Infrastructure Development Charles Mushota said addressing the issue of diversification, job creation and infrastructure development, right skills were required to take up the jobs and projects where local people are given a percentage of participation.

Mr. Mushota said without the right and adequate skilled Zambians, jobs and infrastructure development will be driven by foreigners. "The development of skills is fundamental to Zambia's strategies to achieve national goals."

He said skills competitions could help Zambia sharpen its skills to improve the quality of products and services. "We currently have low skilled people even for hair dressing. My wife and daughter hire foreigners to do their hair....It is a disaster to the country for hair dressing to be done by foreigners. We need to support skills competitions to have pools of skills that drive the country to its right position. We cannot achieve much with citizens aspiring to be accountants, engineers or lawyers without developing artisans, technicians and technologists to shape the country's short, medium and long term development goals."

Mr. Fang Xiang commended China Geo for the donation towards the development of skilled people in Zambia. "This puts a special meeting to the gesture by China Geo. I hope more Chinese companies will contribute towards skills development of our Zambian friends. I wish the competitors all the best. Bring many medals just like the Chipolopolo boys."

Zambia has registered to compete in seventeen (17) of the fifty two (52) skills as shown below:

Skills Category	Skill	Skills Category	Skill	Skills Category	Skill
Building & Construction Technology	1. Bricklaying	Creative Arts & Fashion	7. Fashion Technology	Social & Personal Services	12. Cooking
	2. Carpentry				13. Restaurant Services
	3. Plastering & Dry Wall Systems	Information & Communication Technology	8. Information Network Cabling		14. Hair Dressing
	4. Concrete Construction	Manufacturing & Engineering Technology	9. Mechatronics	Transportation & Logistics	15. Aircraft Maintenance Engineering
	5. Landscaping		10. Welding		16. Heavy Equipment Repair
	6. Wall and Floor Tiling		11. Manufacturing Team Challenge (Design & Make)		

TEVETA separates with Mr. David Chakonta

By TEVET Newswriter

TEVETA has separated with the Director General Mr. David Chakonta. Mr. Cleophas Takaiza is the caretaker Director General until the time a new Director General is appointed. Mr. Takaiza is the Deputy Director -Technical at the Zambia Qualifications Authority (ZAQA) besides being the caretaker Director General at TEVETA. He worked with TEVETA for 13 years starting as Liaison Officer to Director Training Standards until July 2017 when he joined ZAQA.

Mr. Chakonta joined TEVETA in 2003 as Director Development and in 2013 became the Director General until his separation with TEVETA in September 2017

And Ministry of Higher Education advised TEVETA staff to support the new Director General for the smooth running of TEVET and the



Mr. Chakonta

Authority. Former Ministry of Higher Education Permanent Secretary Owen Mgemezulu added that “the new building being constructed at TEVETA will improve systems for efficient service delivery.”

The Permanent Secretary who spoke through Director Vocational Education and Training (DVET)



Mr. Takaiza

Mr. Alex Simumba emphasised on the need for harmonisation of matters to ensure quality service delivery by all divisions and units in TEVETA. “TEVETA should strive to improve on its mandate for profession and quality TEVET in the country.”

Overview of TEVET in Zambia: From the perspective of 5 pillars

By Clive Mutame Siachiyako –Acting Manager Corporate Affairs & Communications [BMC, MSC]

A large part of the Zambian population is young and will in the next few years seek employment. Many of them are at crossroads today, trying to find answers to what they want to or what they can do in their careers. It is imperative that every individual is equipped with at least a skill such that they can earn their livelihood and contribute within their families. An overview of the TEVET sector is important to help career explorers, policy makers, parents and stakeholders in deciding pathways to pursue in policy making, investment in the sector, career options to go for or initiatives to take to improve the sector.

This overview shows grey areas in TEVET and responsive strategies and innovations to address them and leverage TEVET's role in meeting labour market demands for skills development as well as government pronouncements towards i) job and wealth creation ii) national goal of attaining the middle income status by 2030 iii) industrialisation vision of the country in 2064 or iv) value addition, among others.

TEVETA uses government pronouncements, goals and visions as action plans in consultation with stakeholders in addressing grey areas in TEVET. Key questions in addressing these issues could be on: i) what kind of skills are needed to meet national goals and visions taking into account the country's comparative advantage in terms of geographical position, weather and natural resources endowment?; ii) how are those skills going to be developed, in what quantities and in which sectors (strategies for skills development)?; iii) what challenges may emerge in developing required skills and how those challenges can be addressed?; and iii) what action plans are required at implementation and policy levels?

The main highlights of the TEVET sector

are presented in five pillars as below:

Pillar 1: State of TEVET – Access and Participation

There is an increase in the number of training providers offering institutional qualifications, which are not recognised on the Zambia Qualifications Framework. An institutional qualification is awarded by a training institution rather than TEVETA or TEVETA accredited examination board contrary to TEVET Amendment Act No. 11 of 2005, Section 5 and subsections 2 (J, K and M). TEVETA is mandated to award qualifications and accredit foreign examination boards to award qualifications in Zambia according to TEVET Act Number 13 of 1998 read with Amended Act Number 11 of 2005. This Act mandates TEVETA to offer qualifications in TEVET as well as accredit examination boards in the sector for quality assurance purposes and standardisation of assessments (TEVET Amendment Act of 2005 section 5, subsection J).

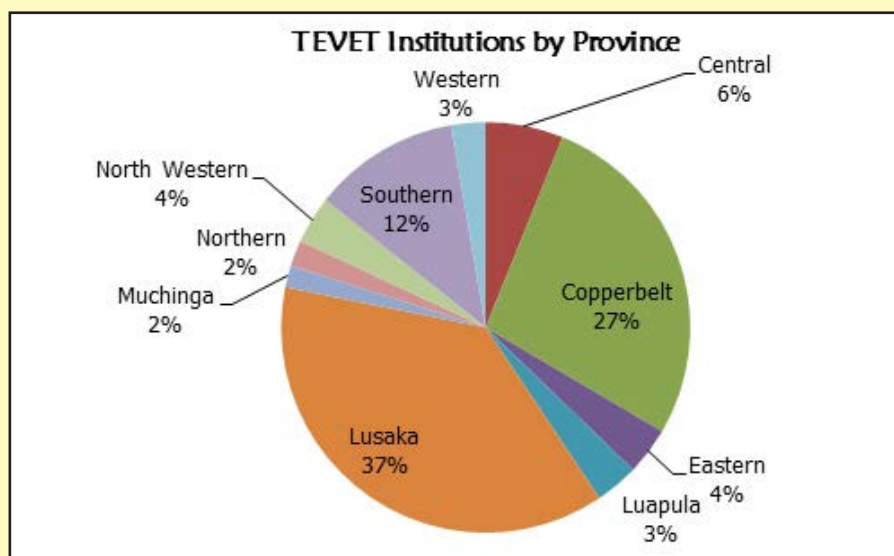
Questions have been raised on the status of qualifications examined by training providers. Individuals with institutional qualifications in TEVET should know that those qualifications do not have a national recognition. The qualifications cannot be placed on the Zambian Qualification Framework or

as entry for further studies. Although some employers accept them either due to lack of knowledge of their status or otherwise, the papers do not meet national recognition requirements as TEVET institutions do not have legal mandate to examine and certify learners.

Demand for training and learners' unawareness has created a fertile ground for offering institutional qualifications. Time and resources are unfortunately invested into qualifications that do not carry their prima facie value. Information, Education and Communication have been some of the measures TEVETA is using to help learners not to invest into training qualifications that are not recognised. But when engaging institutions offering such training is not working as desired, law enforcement will be engaged to help avert the problem.

In addition, training has remained concentrated in 4 provinces along the line of rail (Central, Copperbelt, Lusaka and Southern provinces) disadvantaging provinces off the line of rail. 82% of training institutions registered by TEVETA are in the 4 provinces (see chart and table below). The areas away from the line of rail i) are denied access to training ii) have limited skilled persons to drive and stimulate development in their locations and iii) import skilled labour

PROVINCE	GRADE			TOTAL	%
	1	2	3		
Central	1	7	10	18	6.1 %
Copperbelt	12	26	42	80	27.3%
Eastern	0	4	7	11	3.8%
Luapula	0	5	5	10	3.4%
Lusaka	16	36	58	110	37.5%
Muchinga	0	2	3	5	1.7%
Northern	0	2	4	6	2.0%
North Western	1	6	4	11	3.8%
Southern	7	10	17	34	11.6%
Western	0	6	2	8	2.7%
TOTAL	37	104	152	293	100.0%
%	12.6%	35.5%	51.9%	100%	



to undertake government and other projects, hence depriving such areas income. Government policy to construct new Trades Training Institutes is key in increasing access and participation in TEVET and empowering people with lifelong skills required in adding value to products, job and wealth creation, and meeting medium and long term national development goals.

Furthermore, there is a shift from technical/vocational training to business training in TEVET institutions. This threatens Zambia's competitiveness in the region (as artisans/technicians and other skilled persons required in the country's economic mainstays of mining, tourism, agriculture and other sectors) will be in further short supply. Strategies such as 20% construction contract allocation to local people may not be actualised amid inadequate skilled Zambians to undertake them. The shift may put Zambia into a more consumption and trading country position instead of production and value adding to earn more from the resource endowment. Job creation, wealth and industrialisation are risked when skilled persons to drive the process are in short supply by training providers.

Pillar 2: TEVET financing – sustainable financing

Efforts to increase access to TEVET and improve efficiency/productivity among SME/Informal sector players have been made through the provision of funding. Both donor driven and government financing has been provided by TEVETA. The introduction of the Skills Development Levy, which translated into the establishment of the Skills

Development Fund (SDF) is valuable financing window for improved TEVET. The SDF was established under the Skills Development Levy Act Number 46 of 2016. The Levy is 0.5% of the wage bill to an employee every month.

The Levy is however not payable by employers in the i) public service or local government, ii) employers whose annual turnover is below K800, 000 (eight hundred thousand Kwacha), iii) public benefit organisation approved under the Income Tax Act and iv) Minister. Besides the SDF, the African Development Bank's Support for Science Education and Training Project (SSTEP) provides funding to TEVET. More than K10.8m has been disbursed for SME/Informal sector and out of school youth training mostly for self-employment in 2016 and by June 2017 for the benefit of more than 5,000 learners.

The principle objective of SSTEP is to increase access and improve quality and equity of science and technology in the three Higher Education institutions, namely University of Zambia, Copperbelt University and Mulungushi University. The other objective is to increase access and improve quality and equity of science and technology in the Trades Training Institutions, namely Northern Technical College, Nkumbi International College, Choma Trades Training Institute and Lukashya Trades Training Institute, in line with Zambia's Vision 2030 priorities on Skills Development.

One of the components towards increasing access and quality of science and technology in TEVET is enhancing Work-based and Entrepreneurship

Skills; which covers Skills and Entrepreneurship training for out-of-school Youths and SMEs. SMEs/Out of School youth training is done through TEVETA registered institutions. Funded training has been in: i) *agriculture* (poultry management, pig production, fish farming, horticulture and vegetable production, bee keeping and goat production), ii) *construction* (carpentry and joinery, bricklaying and plastering, plumbing and sheet metal, power electrical), iii) *engineering/manufacturing* (metal fabrication, automotive mechanics, diesel mechanics, vehicle body maintenance and refinishing, design and fashion, welding) and iv) *tourism/hospitality* (food production, wildlife safari guiding, safari driving, canoeing, and camp site construction).

The funding targeted SMEs, out of school unemployed youth and entrepreneurs needing up or reskilling.

TEVET fund is an economic regulatory tool. Training providers funded have to meet required standards and align training behaviour with government policy and quality of training. Pre-assessment of training facilities in institutions applying for funding is done to ensure conformity to training standards.

Pillar 3: equity and inclusiveness – gender parity

Technical and science programmes (from craft, technician and technologist) are male dominated in TEVET while business ones are dominated by females. Assessment and certification statistics from 2010 to 2016 show that the trend in technical and science programmes has remained the same and fluctuated in business programmes. For the period 2010 – 2016, 92% of learners in technical programmes were male and similarly 56% in science programmes were male. In 2016 alone, 94% of the learners in technical programmes were male compared to females. In the same year, the gap was at 16% in favour of male learners in science programmes. Most of the females in science programmes pursue nutritional courses (hospitality related), hence the narrow gap with the males. However, when it comes to business/social science programmes, female learners as shown in the table below:

YEAR	Business				Technical				Science				Total
	Males Passed	Males Failed	Females Passed	Females Failed	Males Passed	Males Failed	Females Passed	Females Failed	Males Passed	Males Failed	Females Passed	Females Failed	
2010	852	161	957	187	3052	507	421	47	18	6	13	5	6,226
2011	1256	186	1661	306	4307	705	479	68	259	42	207	18	9,494
2012	1440	184	2044	418	4361	698	439	43	409	63	374	30	10,503
2013	1539	219	2017	328	5157	973	497	69	617	66	552	37	12,071
2014	1638	262	2005	353	5724	1295	419	69	698	94	607	44	13,208
2015	1398	228	1771	353	5974	1459	459	86	1181	174	901	112	14,096
2016	1361	248	1607	392	5959	1215	407	75	1601	278	1156	184	14,483
Total	9,484	1,488	12,062	2,337	34,534	6,852	3,121	457	4,783	723	3,810	430	

Learners in craft certificate, technician and technologist/diploma programmes in TEVET: 2010 - 2016

YEAR	Business				Technical				Science			
	Males Passed	Males Failed	Females Passed	Females Failed	Males Passed	Males Failed	Females Passed	Females Failed	Males Passed	Males Failed	Females Passed	Females Failed
2010	0	0	0	0	2211	14	824	1	259	1	956	1
2011	0	0	0	0	2156	100	779	26	249	8	977	3
2012	0	0	0	0	2937	397	909	64	323	20	1086	42
2013	2	2	9	8	3946	381	978	95	416	45	1225	78
2014	44	14	54	8	5223	653	1184	143	659	53	1581	85
2015	159	141	197	21	6508	795	1427	157	969	124	1718	102
2016	222	42	119	30	5807	506	1387	138	1083	79	1694	60

Learners in trade test and skills awards in TEVET: 2010-2016

The trend, although similar in technical programmes at trade test levels and skills awards; the number of female learners in science at these lower levels is higher as shown in the table for trade test. This means, the higher the level, the less the number of female learners getting into these programmes. Lower numbers of females in technical and science programmes limits their participation in technical and scientific world of work or research. They have concentrated on social sciences, business and hospitality programmes.

TEVETA believes that the increase in the number of Technical Girls' Schools may change the current status quo. Girls with technical and science career inclination and strengths may come into tertiary education in numbers similar to boys. Providing incentives such as scholarships and employment quotas for girls with technical and science based training may further help narrowing the mismatch.

Technical and science training is significant in strengthen Zambia's ability to; i) add value to raw materials for more earnings, ii) innovating ways of efficient production, fighting diseases (diagnosis/ treatment), utilising ICTs in commerce and trade to ease doing business, and

iii) developing a competitive labour force in attracting investment. That is, having relevant and adequate skilled persons to drive and realise return on the investment.

Pillar 4: TEVETA developed and approved Curricula– curriculum development

As at 31st December 2016 TEVETA developed, reviewed and approved 247 curricula at technologist, technician, certificate, trade test and skills award levels. 53 of the curricula were at technologist level, 22 technician, 57 certificate, 89 trade test and 41 at skills awards. It is TEVETA's mandate to develop and review curricula in consultation with industry to ensure it remains relevant to industry requirements from learners.

Pillar 5: strategies to improve quality of TEVET

New ways of improving TEVET are pursued constantly to make it more responsive to skills development needs and labour market requirements. Among them are: i) Work, Innovation and Skills Competitions Based TEVET Learning System and ii) Recognition of Prior Learning.

Work, Innovation and Skills Competitions Based TEVET Learning System is a collection of complementary activities and experiences designed to enable individuals acquire the Knowledge, Skills, Attitudes and Values (Competences) which with time, professional practice, mentorship and/or incubation support should help them transform into internationally competitive skilled persons exhibiting the following attributes among others: i) international skilled performer ii) critical thinker, iii) entrepreneurial and innovative problem solver, iv) effective and ethical leader, v) productive and responsible citizen, vi) Science, Technology, Engineering Mathematics (STEM) literate, and vii) climate change resilience and adaptation agent.

The Recognition of Prior Learning (RPL) is a process by which individuals can claim and gain recognition towards specific national qualifications based on demonstrated learning that has occurred at some time in the past. Therefore, RPL recognises knowledge, skills and attitudes that have been acquired in other forms of learning that were not certified. RPL involves documentation, validation, assessment and certification of learning that is acquired outside formal training (traditional or classroom) system.

Innovation Centre: An avenue to display and protect innovations?

By TEVET Newswriter

The 2017 Trade Fair had an additional stand housing different innovations. The innovations ranged from information communication technology (ICT) to green energy generation. The aim was to showcase innovations and sharing information. The Patents and Companies Registration Agency (PACRA) was in the innovation Centre to help innovators on patenting their innovations. It also aimed at creating an association of innovators to champion innovative ideas and seek financing to mature them.

Patenting innovations gives the owner exclusive rights to exploit and use the inventions years after the innovation's birth. It also prevents others from commercially using the invention, thereby reducing competition and enabling the inventor to establish her/himself as a pre-eminent player. Innovators can sell or license their invention to have it commercialised by another person. The invention becomes a source of income to the innovators in this case. Innovators have negotiating power in the process of acquiring the rights to use their patented inventions.

Scholarly consensus shows that innovation, which is patented, creates a positive image of the inventors. Investors, potential business partners or shareholders view patent portfolios as a demonstration of expertise, specialisation and technical capacity within a country or an enterprise. This may prove useful for raising funds, finding business partners and raising the enterprise's market value and share.

Inventors during the 2017 Zambia International Trade Fair showcased varied creative ideas. The inventions cut across sectors of the economy. Some focused on improving data collection and taxing system, addressing energy problems, enhancing soil fertility, inter alia, solar and biotech power generation.

Information Communication Technologies

One of the inventors came up with an online system to capture SMEs, their kind of business and location in the city or province. For example, hawkers would have the street they operate from and the kind of merchandise they sell captured. If anyone who is not given a hawking license is found in a particular street, it means they are illegal and the law can be applied on them for operating where they are not permitted to vend from.

Besides sanitising street hawking, the idea is to ease hawkers' likelihood to obtain financial injection from lending institutions that are skeptical to give loans to SMEs without reliable information about them. The

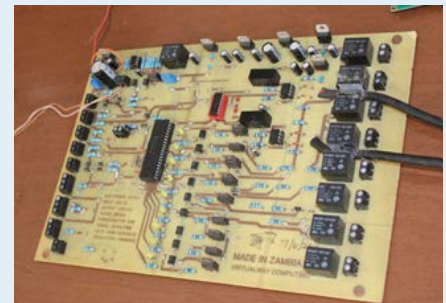
Ministry of Commerce and Trade is housing the system. SMEs can register to become part of the database of SMEs. The system may also help in taxing the informal sector. Currently, taxing the informal sector has been a problem for a number of reasons among them

Green energy

Energy is becoming problem to provide, especially in Zambia where much of the energy is hydro-generated. A reduction in water levels results into reduced production and high usage of charcoal by households. Inventors during the Fair presented several green energy sources. Among the green energy initiatives were those that focused on reducing deforestation by introducing pellets made from sawdust, grass, maize stalks or groundnuts shells. The invention comes with a brazier that uses pellets. The brazier has a charging ability to supply power for lighting as the burning takes place. It has the capacity to charge a batter as it burns and store power for lighting purposes. The inventors argued that the batter can stay for two weeks when charged. The brazier can also charge cellular phones.

The other innovation focused on solar energy in terms of warming or heating water. The innovation looks at how aluminum dishes can trap heat from the sun to heat water. The simple dish is connected to a water heating brazier like panel. Energy scholars have argued that innovations in energy storage, smart grid, and electricity generation technologies will affect every part of the source-to-consumer supply chain for powering the planet. Energy storage technology improves the viabilities of wind and solar power – two energy sources that remain cost prohibitive due to expenses related to batteries that would store generated energy.

The other inventors designed a system that uses both solar and wind energy alternatively. When the windmill is not working, the solar system starts working. Generated power is then stored into a storage room with batteries for usage. Largely, solar energy is present in abundance around us. The problem is how to harness a substantial portion of it for human use. How to raise the efficiency bar of solar conversion into electricity? Scientists, engineers and other gurus are continuously engaged in finding a way out for this problem. Efforts of these experts have resulted into trapping visible and invisible rays of the sun for electricity as well as creating photovoltaic cells that can capture visible, infrared and ultraviolet light of the sun. Energy experts contend that photovoltaic will be highly efficient for solar power conversion



A circuit board designed by Zambia ICT College innovators for monitoring and regulating solar energy generation and usage.

Organic fertilizer

Another group of innovators had an invention on making organic fertilizers from organic products. The inventors knowing that fertilizer contains nitrogen (N), phosphorus (P) and potassium (K); they use organic materials with components contain the three components. Their goal is to improve soil fertility without destroying the texture of the soil.

Research has shown that natural and organic fertilizer differs from chemicals in that they feed the plants while building the soil. Soils with lots of organic material remain loose and airy, hold more moisture and nutrients, foster growth of soil organisms, and promote healthier plant root development. If only chemicals are added the soil gradually loses its organic matter and microbiotic activity. As this material is used up, the soil structure deteriorates, becoming compact, lifeless and less able to hold water and nutrients. These results in increased amounts needed to feed plants.

In summary, innovation is crucial for the development and deployment of technologies. A widely deployed model to understand technology builds on the concept of the technology life cycle. The life cycle of technologies can be divided into a number of steps – from invention, through Research and Development (R&D) and market development, to commercial diffusion. Different processes can be discerned at each stage of the life cycle and different instruments can be deployed to promote innovation.

It has been established that patents are crucial for technological innovation in the context where they apply. They can be used to generate revenues (from licenses), encourage synergistic partnerships, or to create a market advantage and be the basis for productive activities. As such they create strong incentives for innovation in market-based economies. It has many advantages for inventors and society as a whole, which can benefit from the inventions.

7NDP: Zooming in on vocational skills

By Tamara Bilima-Mulenga –Zambia Institute for Policy Analysis & Research

The Seventh National Development Plan (7NDP) launched in June 2017 provides policy direction for Zambia for a five-year period. The Plan will also inform the annual budgets in the same period. At its core is economic diversification through which the country intends to achieve its Vision 2030 of a prosperous middle-income country. The 7NDP unlike previous plans, it outlays a menu of innovative approaches to improve vocational skills acquisition. The state of education and skills attainment in Zambia is very poor. The 2014 Labour Force Market shows that 11% of the labour force had not attained any education, 41% and 43% had primary and secondary education respectively while only 5% had post-secondary education.

Furthermore, a mere 15% of the population aged 15 and above received skills training with the common skills acquired being bricklaying and carpentry for males and design and tailoring for females. These skills were mostly acquired through self-training, which accounted for 36% followed by apprenticeship at 19%. Formal skills training through public and private learning institutions accounted for 31%, which indicates a gap in formal skills training necessary for more rewarding employment. This means the majority of skills are informally acquired.

As a result, 57% of the people who acquired different skills did not actually obtain any certification for their skills. In terms of employment prospects post skills training, only 24% of those who acquired skills entered wage employment. In addition to low access to skills training, there are also a number of challenges faced in skills training. These include low absorptive capacity of technical and vocational education and training

(TVET) institutions, poor state of infrastructure as well as outdated teaching aids and curricula, lack of capacity building for lecturers and mismatch between the skills offered and industry's needs.

Recognising the poor state of skills training in Zambia, government has through the 7th National Development Plan come up with ambitious approaches for considerable improvements. Some of the strategies actually started during the Sixth National Development Plan. The 7NDP has listed eight strategies to be implemented in relation to skills development. These are: i) Secondary School Vocational Education and Training which offers vocational training in secondary schools; ii) institution-based learning which offers skills through TVET institutions; iii) open, distance and flexible learning which offers training on distance basis allowing learners to continue working; iv) workplace or on-the-job training which allows the learner to acquire skills at the workplace. Others are: v) Learnership; vi) recognition of prior learning; vii) national skills competition; and viii) career exploration and information.

One of the aforementioned strategies mainstreams vocational skills in secondary school recognising learners that learners should have the ability to choose the academic or vocational pathway for their education development. To this effect, curriculum in 2013 was revised and two pathways were created for the learners. The strategies also encompass individuals that may wish to combine both work and impleore both oral and/ or written assessments.

This aspect of skills training is premised on the fact that there are a number of people in Zambia that

have acquired skills informally mainly through apprenticeship and self-training. However, skills acquired informally cannot be used to acquire decent jobs because they are not certified. Certifying them through the Recognition of Prior Learning (RPL) initiative is thus important and has the potential to increase the number of people with formal skills. In addition to implementing the aforementioned strategies, government has set to establish a vocational skills bursary scheme. Currently, government has not fully extended the bursary schemes to vocational skills and financial barriers continue to hinder many able but poor young Zambians from assessing skills training.

The introduction of the vocational skills bursary scheme is therefore likely to remove financial barriers to skills training, which is likely to increase the number of people acquiring formal skills. Other programmes that government intends to implement for skills development according to the 7NDP include the establishment of centres of excellence, rehabilitation and construction of training institutions and inclusive vocational training promotion.

In conclusion it is exciting to see the 7NDP promising to transform skills training. For the first time in Zambia, people may have dropped out of school or have no education and obtained skills informally will have their skills recognised and certified. The different learning options suggested will also ensure those with various capabilities both financially and academically can still acquire recognisable skills, hence leaving no one behind. The recognition of prior learning has potential to have approximately 655, 000 people with informal skills trade tested and certified, which will improve their employment prospects.

30,000 jobs created in the construction sector between 2012 and 2014 –Survey

By TEVET Newswriter

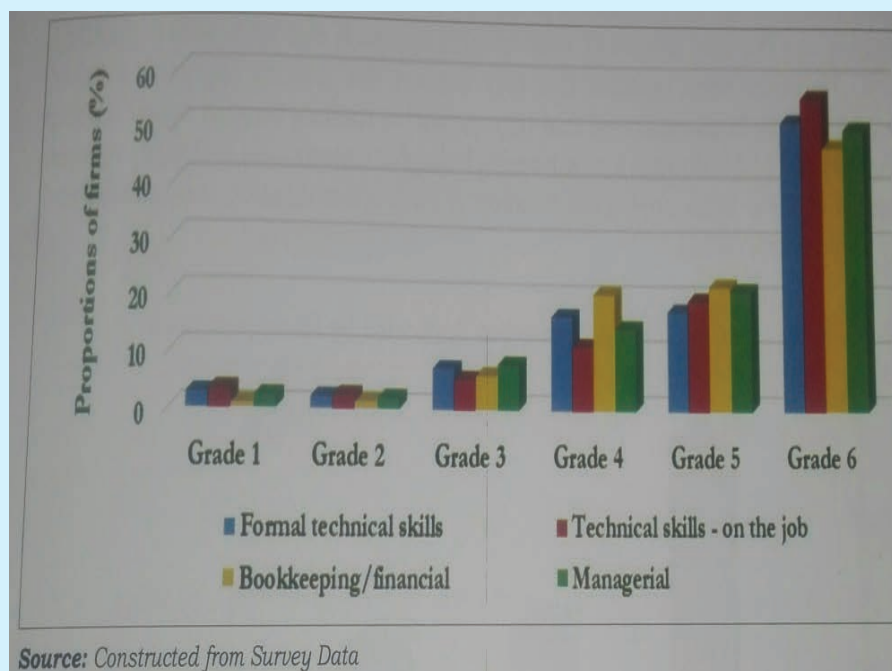
The construction sector recorded a substantial job growth of 43.5%, translating into an addition of more than 30,000 jobs to the industry between 2012 and 2014 a survey done by the National Council for Construction (NCC) and Zambia Institute for Policy Analysis & Research (ZIPAR) has shown. The jobs were created by companies registered with the NCC.

The survey further found that construction firms mainly offered quality jobs with minimum wages, paid public holidays and overtime allowances. Firms in lower grades (Grade 4, 5 and 6) outperformed their higher grade counterparts in the provision of quality jobs. The NCC grades construction firms according to their abilities to manage contracts based on size, financial and human capital capabilities.

The survey further highlights the need for employee training in the construction industry especially for firms in lower grades where 79.5% affirmed the need for training mainly in formal and on-the-job technical skills. On-the-job training was affirmed as most ideal for most firms because the gap between skills acquired in learning institutions and the nature of jobs available in the labour market was growing.

Firms involved in specialised activities face difficulties in finding workers with skills profiles that match job requirements. The mismatch between skills and job requirements was perceived to increase the employment of foreigners even in low-skill jobs in Zambia. "The construction is plagued with a great need for training either due to significant skills and job requirement gaps or service delivery standards in the market were rising" stated the survey.

Formal and on-the-job training technical skills, financial management



and general managerial skills were the main areas which the firms stated they required further training. The Survey further observed that training needs reduce as firms climb up the grades ladder. General readiness skills bordering on critical problem solving skills and professionalism at first level were essential to improve productivity and surviving aggressive competition in the industry.

The survey shows that usage of modern construction related technologies among foreign owned firms [72.4% compared to Zambia owned –54.6%] was relatively high with about 57.1% of firms utilising them in their operations. It is therefore important to foster business linkages between Zambia and foreign owned firms to encourage skills and technological transfers for production efficiency and growth among Zambia owned firms.

Furthermore, the survey findings showed that some firms did not have access to critical information required for competitiveness and growth. The critical information needs cited

were associated with government tenders and contracts at 25%, access to financial services at 20% and government incentives at 19%. The information gap was mainly due to lack of reliable information sources and poor collaboration and dissemination of information by stakeholders.

The survey sampled 351 firms registered with the NCC. 250 were Lusaka based while 101 were on the Copperbelt. 91.4% of the sampled firms were Zambia owned while 4.2% and 4.4% were foreign and jointly owned firms respectively. Zambia owned firms were however in lower grades (4-6) despite being the majority. Being in lower grades limited their access to high value contracts. The survey analysis also showed that Zambia owned firms mostly faced difficulties in grade promotion due to lack of business opportunities arising from stiff competition from foreign owned companies. Other difficulties were stringent financial and administrative requirements for progression. Foreign owned firms thus dominated the industry in accessing public tenders.

Promoting a green economy: From the TEVET perspective

By TEVET Newswriter

The 91st Agricultural and Commercial Show held under the theme “promoting a green economy”. The Technical Education, Vocational and Entrepreneurship Training Authority (TEVETA), Zambia Qualifications Authority (ZAQA) and Higher Education Authority (HEA) exhibited together under a theme interpretation emphasizing on green knowledge and skills, green jobs and principles of green skills in quality curriculum under OSHE (Occupational Safety, Health and Environment). The curriculum imparts work virtues and principles that conscious of the environment in different undertakings graduates in technical education, vocational and entrepreneurship training (TEVET) do.

The promotion of the green economy in TEVET is reflected through the inclusion of environmental protection aspects in curriculum development and assessments. This is done to spread environmental protection standards throughout the TEVET sector in terms of green skills and lifestyle practices. These environmental protection practices across the sector are thus monitored and evaluated for ascertaining their implementation. Internally, TEVETA is creating paperless processes for accreditation, registration and assessments.

The curriculum brings out environmental protection standards that should be imparted on learners in TEVET. Scholarly consensus on green economy promotion puts it that the development of employability skills is an essential component of TVET and the list of skills varies across countries. However, they are all related to general skills valued by employers and the ones that help individuals gain employment and succeed at work. The emergence of a green economy agenda within the framework of sustainable development makes additional requests on the composition of employability skills. A green economy requires development of generic green skills (among other skills)



A learner displaying landscaping skills during the 2017 Zambia Agricultural and Commercial Show

that are in demand in almost any occupation.

TEVETA and industry players have developed curricula in green skills in i) supervision of sustainable building, ii) wildlife safari guiding, and iii) embed OSHE [occupational, safety, health and environment] in other programmes. The curriculum in supervision of sustainable building includes green skills on construction sites and skills for identifying sustainable materials. That is, distinguishing green and building materials from non green ones and green supervising skills to the construction company owners.

Wildlife safari guiding curricula seeks to create an appreciative mindset of nature to promote tourism, co-existence with wildlife, and building nature conservation practices. The aim is for people around national parks not to view wildlife as a source of game meat and other trophies but as a source of income via tourism and related business opportunities.

TEVETA's mandate is anchored on industry and stakeholder engagement in different areas. Some of the collaborations are on curriculum development, developing standard test projects, assessments, training systems development or quality assurance. In promoting a green

economy, some collaborative efforts are with likeminded government institutions including Zambia Qualifications Authority, Higher Education Authority, professional institutions like Engineering Institution of Zambia and the United Nations system. In the United Nations, the International Labour Organisation is among the organs the Authority works with towards green jobs in developing programmes and curricula in green jobs, skills and technology and OSHE.

Other collaborations are pursued under the Recognition of Prior Learning. RPL cooperative opportunities are towards assessing and certifying bio-digester artisans (masons) trained by SNV. 300 are projected to be trained in Lusaka, Southern, Western, Central, Northern and Copperbelt provinces under the project. Lusaka Vocational Training Centre was the training focal point in Lusaka. Biogas-powered milk chillers for rural areas are being developed under the SNV programme. From the assessment perspective, opportunities pursued are in i) recognising green skills training ii) map out trainers and trained persons green skills such as in bio-digester and biogas making for training of others to protect the environment from excessive charcoal burning.

PHOTO FOCUS



Lusaka Youth Resource Centre TEVET Financed learners doing practical projects in Design, Cutting and Tailoring



St Paul's Training Centre TEVET funded learners doing Metal Fabrication practical lessons.



LIBES TEVET financed learners doing domestic wiring.



A TEVET funded learner from Kasiya College explaining intricacies of goat production to ZANIS crew.



TEVETA, ZAQA & HEA team during the 2017 Agricultural Show. The three regulators exhibited together as part of collaboration towards quality training in the country

TEVETA Mission and Mandate

VISION

A World-class Technical Education, Vocational and Entrepreneurship Training (TEVET) system that drives skills empowerment for sustainable development.

MISSION

To ensure supply of internationally competitive skilled persons through:

- i) Regulation
- ii) Coordination
- iii) Monitoring and
- iv) Evaluation of Technical Education, Vocational and Entrepreneurship Training (TEVET) service delivery.

Mandate of TEVETA

The Technical Education, Vocational and Entrepreneurship Training Authority (TEVETA) is an institution created under the Technical Education, Vocational and Entrepreneurship Training Act (No. 13 of 1998), read together with the Technical Education, Vocational and Entrepreneurship Training (Amendment) Act No. 11 of 2005. Its general function is to regulate, coordinate and monitor technical education, vocational and entrepreneurship training in consultation with industry, employers, employees and other stakeholders.

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