

MEDIA STATEMENT

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MINISTER NZIMANDE PLEASED WITH PROGRESS ON 4IR INTERVENTIONS WITHIN THE POST SCHOOL EDUCATION AND TRAINING SECTOR

The Minister of Higher Education, Science and Innovation, Dr Blade Nzimande, is pleased with the implementation of the Fourth Industrial Revolution (4IR) interventions within the Post School Education and Training sector.

This follows recorded partnerships and progress by universities, colleges and Sector Education and Training Authorities (SETAs) in advancing 4IR interventions with the sector.

DHET Partnership with CISCO and HUAWEI

The Department of Higher Education and Training (DHET) partnered with CISCO and HUAWEI to align the existing TVET colleges curriculum with industry demands in the digital skills area.

“Under the Cisco agreement, at least three thousand (300) lecturers are being trained in our 50 TVET Colleges to upgrade their skills on Information Communication Technology (ICT) related NC(V) qualifications. Under the Huawei agreement, lecturers currently at thirty-two (32) TVET colleges are being trained to support the introduction of subjects such as Routing & Switching, Big Data, Artificial Intelligence, WLAN, and Security and Cloud Computing,” said Minister Nzimande.

Occupational Programmes aligned to priority sectors of the Economic Reconstruction Recovery Plan (ERRP)

The Minister said Colleges identified Occupational Programmes to be introduced for purposes of aligning to the priority sectors as stipulated in the Economic Reconstruction and Recovery Plan (ERRP). This is done in partnership with the Quality Council for Trades and Occupations (QCTO) and INDLELA (support center for artisan development in South Africa).

“These programmes will be supported through funding from SETAs and the National Skills Fund (NSF), guided by research undertaken through the Labour Market Intelligence Partnership (LMIP) and Sector Skills Plans (SPPs), which highlighted the growing demand for digital and ICT skills across a variety of job roles,” said Minister Nzimande.

Demand led skilling model for the Global Business Services and ICT industries

“With support from the Presidential Employment Stimulus to the tune of R100 million, the National Skills Fund (NSF) is managing the roll-out of a demand led skilling model for the Global Business Services and ICT industries. This initiative is expected to be expanded in future years through insourcing funding from other public and private sector funders,” the Minister said.

Approval and accreditation of programmes

One of the provisions of the Economic Reconstruction and Recovery Plan (ERRP) Skills Strategy is to ensure expanded access to short programmes and full qualification required for the economic growth of South Africa.

“This demands that quality councils introduce greater flexibility in their approval processes to ensure faster turnaround for timely approval and accreditation of programmes to respond to changes and innovations in ICT related fields,” said Minister Nzimande.

Agriculture Sector Education and Training Authority (AgriSETA)

Minister Nzimande said the Agriculture Sector Education and Training Authority (AgriSETA) utilised the 4IR interventions to prioritise occupations within the agricultural sector.

4IR interventions were introduced in the occupations which includes Industrial Mechanician, Planning Managers (Manufacturing), Processing Unit Managers, Plant Managers (Manufacturing), Engineering Managers, Agricultural Engineering Technicians, Agricultural Product Processing Engineering Technologists, Crop Production Mechanization Engineering Technologists, Environmental Protection Professionals and Conservation Scientists. These occupations are directly linked to 4IR where the integration of various technologies assist farmers in increasing efficiencies.

“These Occupations form part of AgriSETA’ s priority occupations and are prioritised in the 2022/23 financial year through funding of bursaries, Graduate Placement and Learnerships,” said Minister Nzimande.

Banking Sector Education and Training Authority (BANKSETA)

The Banking Sector Education and Training Authority (BANKSETA) developed occupational qualifications to address the growing need for formal qualifications related to Cyber Security. These qualifications will be registered with the Quality Council for Trades and Occupations.

“A training programme in Cyber Security was implemented and recently the SETA also started to train high school students on skills for the future which include Coding, software programming and data science,” added the Minister.

The BANKSETA allocated funds to re-skill and or upskill employees whose roles may be impacted by automation, artificial intelligence, and the increased need for data analytics. There is dedicated funding allocated to IT related skills and some of the programmes funded which include Data Management, Cobit 5 and Analysing Data.

The programmes for unemployed youth on the Kuyasa Learnership include modules in Microsoft Azure Fundamentals, Designing and Implementing a Data Science Solution on Azure, Microsoft Azure Artificial Intelligence Fundamentals, and Designing and Implementing an Artificial Intelligence Azure Solution.

Construction Sector Education and Training Authority (CETA)

Minister Nzimande said the Construction Sector Education and Training Authority (CETA) revised its Sector Skills Plan (SSP) to address issues of green technologies and 4IR skills including the use of robotics and drones in the sector.

The CETA will also reviewing its training material across the board to address contemporary skills and innovations informed by the 4IR.

The Chemical Industries Education and Training Authority (CHIETA)

The impact of 4IR on the chemicals industry is seeing increasing use of Artificial Intelligence (AI), use of computer systems to perform tasks that would require human intelligence.

The CHIETA has thus far developed programmes focusing on the youth and rural learners through its Strategic and Performance Planning Process.

The Minister said CHIETA is currently exploring 4IR opportunities and planning to open CHIETA Innovation Hub by 2025. The Innovation Hub will be dedicated to support the growth of very early-stage technology-based businesses in the South African chemicals industry.

“As part of Research capacity building for students from previously disadvantaged institutions, the CHIETA funded the Vaal University of Technology to develop master’s students, through the development of a chitosan membrane for electricity production project, which will be utilised to develop fossil batteries for electric cars and capacitate the students with fourth industrial revolution skills,” the Minister said.

Energy and Water Sector Education and Training Authority (EWSETA)

Minister Nzimande said the 4IR Project(s) currently supported by the Energy and Water Sector Education and Training Authority (EWSETA) influences the emerging technologies and Artificial Intelligence Skills in the Sector.

The EWSETA is supporting a Research Project to ensure that it has relevant, up-to date data and information on the influence of emerging technologies and artificial intelligence skills in the energy and water sector.

“The 4IR Aquatech Accelerator is such a sector specific programme that seeks to fast-track sustainable solutions for Africa’s water-energy-food nexus challenges. This is a mentorship driven programme that is designed to identify, develop, support, fund, and up-scale a new generation of 4IR enabled solutions,” said Minister Nzimande.

The Minister said the EWSETA has partnered with MTN in their Annual MTN APPS Award to give opportunities to the youth to develop Energy and Water Education APPs.

The Minister further said the EWSETA career guidance interventions also embed 4IR skills and careers within the energy and water sector, which includes drone technology which is widely used in the renewable energy sector.

EWSETA has also partnered with the 4IR-AquaTech Business Accelerator programme, which aims to capacitate young entrepreneurs with skills through a six (6)-month mentorship programme designed to identify, develop support, fund and upscale a new generation of 4IR enabled solutions to address the Eastern Cape Province’s pressing food-energy-water nexus challenges. The programme started in June 2021 with a 4IR Aqua-Tech sociotechnical debate and hackathon to focus on the Eastern Cape water crisis.

Education, Training & Development Practices Sector Education Training Authority (ETDPSETA)

Minister Nzimande said the Education, Training & Development Practices Sector Education Training Authority (ETDPSETA) is supporting its Stakeholders, Constituencies, and the Unemployed persons in acquiring skills in 4IR.

Unemployed persons:

Currently two-hundred and fifty (250) unemployed young registered with the University of Johannesburg and Southwest TVET College on the Artificial Intelligence and Computer Programming digital skills programmes.

4IR Research Chair:

The ETDPSETA partnered with the University of Johannesburg to established a research chair on 4IR. The research looked at the processes of programme implementation at identified TVET Colleges, systems and processes on how to automate TVET systems for effectiveness and incorporation of 4IR principles and programmes. The research recommendations were distributed to TVET colleges for 4IR implementation.

4IR Centres of Excellence in TVET Colleges:

Ten (10) TVET Colleges received financial support to establish 4IR mini laboratories and encouraged to work with the relevant industries for the delivery of programmes. Each TVET has been allocated an initial amount of R4m to commence with the project.

Support for Community Education and Training Colleges (CETs):

R5.4 Million has been set aside to support Community Education and Training Colleges (CETs) to establish digital learning platforms to benefit students and lecturers.

Department of Basic Education:

The ETDPSETA has provided financial support to the Department of Basic Education (DBE) to improve teaching and learning. A TV Channel has been established through this support.

Several initiatives are in place to digitise teaching and learning which include training of teachers in coding, robotics and ICT Integration into teaching and learning.

Provision of Laptops and data to the unemployed youth

All unemployed beneficiaries that are supported by the ETDPSETA receive a laptop and data in addition to the stipends- bursaries, internships, cooperatives development and learnerships and skills programmes.

Food & Beverages Manufacturing Sector Education and Training Authority (FOODBEV)

Minister Nzimande said the FoodBev SETA held a capacitation workshop in February 2022 with the Theme: “Expanding Access to Quality Skills Development programmes in the era of the Fourth Industrial Revolution for the Food and Beverages Manufacturing Sector”. The aim of the workshop was to capacitate stakeholders with technological skills needed in the Food and Beverages Manufacturing Sector.

The FOODBEV SETA is involved in training and upskilling/reskilling of two hundred (200) Small Medium Enterprises (SMEs) on the digital world of small businesses in the sector.

The SETA is also funding ten (10) PhD and forty (40) Masters Research and Innovation students to respond to 4IR needs in the sector.

Fibre Processing & Manufacturing Sector Education and Training Authority (FP &M SETA)

The Fibre Processing & Manufacturing Sector Education and Training Authority reviewed its occupational qualifications to be registered with Quality Council for Trades and Occupations (QCTO). This will ensure that 4IR skills focusing on digitization and innovation are incorporated in the updated occupational curricula.

The FP&M SETA implemented a number of technical & innovative projects in partnership with FP&M SETA employer associations and large employers to address Business Economic Recovery and Reconstruction (ERRP). This includes the

National Bargaining Council for Clothing Industries, Printing South Africa, Forestry South Africa, Celrose Clothing, TVET SA and Prestige Clothing to upskill employees.

Minister Nzimande said the FP&M SETA provided learnerships and skills programmes which focused on automation; digitising design (CAD & CAM) and preproduction processes; use of artificial intelligence; use of additive manufacturing; robotics and coding; entrepreneurship and business coaching and mentoring.

The FP&M SETA also funded workshops, skills summit and conferences to support the promotion and advocacy of 4IR skills and skills for the digital economy for employees such as the FP&M SETA Skills Summit, titled the “Future Perfect Digital and Innovation skills for business recovery and reconstruction, IPM Conference”.

Furthermore, the FP&M SETA implemented temporary Employer-Employee Relief Scheme (TERS) which promotes upskilling of workers facing possible retrenchment in entrepreneurship, 4IR skills and business coaching and mentoring.

“The FP&M SETA will continue to include the components of the 4IR skills relevant to the sector which will be affected by robotics, artificial intelligence and machine learning. The sector will also continue to produce skills such in big data specialists, analytics, Internet of Things, Block Chain, Automation, augmented reality, cyber security, data analysis and cloud computing,” said Minister Nzimande.

Financial and Accounting Services Sector Education and Training Authority (FASSET)

The Financial and Accounting Services Sector Education and Training Authority (FASSET) introduced an indicator in its Annual Performance Plan for 2022/2023 to do digital skills trainings for unemployed youth.

“FASSET allocated around R5m to train 500 learners in the following areas: Microsoft Office, Microsoft Digital Literacy, Microsoft Digital Literacy for Windows, Microsoft Planner, Microsoft data analytics, Microsoft Power BI, Analysing Data with Power BI,” said Minister Nzimande.

Health and Welfare Sector Education and Training Authority (HWSETA)

In order to prepare students for the Fourth Industrial Revolution, the Health and Welfare Sector Education and Training Authority (HWSETA) incorporated some technical and work readiness skills into the their funding model.

“These includes resume writing, self-presentation, time management, professionalism, and work etiquette and well as technology-based skills such as beginner, Intermediate or advanced computer programmes. Information technology graduates are also funded for coding or computer programming short programmes,” said Minister Nzimande.

Media Information and Communication Technologies SETA (MICTSETA)

Minister Nzimande said the Media Information and Communication Technologies (MICTSETA) developed an Integrated Digital Skills Strategy (IDSS).

“This Strategy sets out a structured series of initiatives intended to contribute to the capacities of South Africans to meet the skills gap challenges arising from the increasing deployment and adoption of 4IR technologies and the impact of these on the world of work, education and broader society,” said Minister Nzimande.

The Minister further said the MICTSETA developed a total of twenty-eight (28) 4IR qualifications inclusive of full and part qualifications. These qualifications has been submitted to SAQA and the QCTO for verification and further recommendations. The SETA has further established 4IR Research Chairs in Public Universities.

Manufacturing Engineering & Related Services Education and Training Authority (MERSETA)

Minister Nzimande said the Manufacturing Engineering & Related Services Education and Training Authority (MERSETA) is involved in a number of experiential learning and skills for 4IR with various universities and colleges.

These institutions includes the Cape Peninsula University of Technology, Central University of Technology, Durban University of Technology, Mangosuthu University of Technology, Nelson Mandela University, North-West University, Rhodes University, Tshwane University of Technology, University of Cape Town, University of The Free State, University of the Western Cape, Vaal University of Technology; and Technical and Vocational Education and Training Colleges such as: Vuselela TVET College, Boland TVET College, College of Cape Town, East Cape Midlands TVET College, Ehlanzeni TVET College, Ekurhuleni East TVET College, False Bay TVET College, Vhembe TVET College, Ekurhuleni West TVET College and False Bay TVET College.

Public Service Sector Education and Training Authority (PSETA)

The Public Service Sector Education and Training Authority (PSETA) has partnered with Microsoft South Africa to provide digital skills programmes to public sector employees.

The online platform, Batho Pele Digital Skills enabled by Microsoft Community Training, gives public servants free access to learning content ranging from entry-level digital literacy skills to advanced skills for technical roles. Programmes on the platform are available to the entire public sector, from local, provincial, and national government to the legislative sector, public entities and state-owned entities. The courses offered are basic digital skills and digital literacy and Microsoft office programmes used in the workplace.

To address the issues of the unemployed, the PSETA also partnered with Microsoft South Africa and its implementing partner Afrika Tikken Services on the Global Skills Initiative South Africa (GSISA) in rolling out digital skills across the country.

“The PSETA is a strategic partner to the project and supports unemployed learners to access this opportunity and promote the initiative through its networks to ensure that as many unemployed learners as possible have free access to the best resources, to improve knowledge and capabilities,” said Minister Nzimande.

The Minister further said the PSETA allocated per province a minimum of two thousand (2 000) spaces for unemployed South African citizens to participate in this programme.

Safety and Security Education and Training Authority (SASSETA)

The Safety and Security Education and Training Authority (SASSETA), offers drone pilot training to the private security and policing subsectors; and electronic case and evidence management (court online, and caselines) training to the Justice and Legal Services subsectors.

“For unemployed youth, SASSETA has awarded R15 million in bursaries to Universities South Africa to assist with the historical debt of students so that they can graduate and enter the economy. R3 million has been awarded to the University of the Witwatersrand to assist with the registration of new students,” said Minister Nzimande.

The Minister said the target for both interventions is the ‘missing middle’ students who are studying in the 4IR fields that are relevant to SASSETA and in terms of the Occupations listed in the Economic Reconstruction and Recovery Plan.

This intervention targets ICT Systems Analyst; ICT Security Specialists and Computer Network and Systems Engineers; Software Developer, Programmer Analyst, Developer Programme and ICT Project Manager.

Transport Education and Training Authority (TETA)

The Transport Education and Training Authority (TETA) has commissioned a research study on the Impact of 4IR on the sector.

The research study is aimed at identifying 4IR skills sets for all eight (8) sub-sectors in the transport sector.

“TETA entered a partnership with Stellenbosch University and Tshwane University of Technology to develop training programmes that will address the 4IR skills needs in the industry. Part of these projects include training the employed in the industry and unemployed on the developed 4IR training programmes,” said Minister Nzimande.

TETA is also funding projects to provide training for drone pilots and unemployed learners on drone pilot training to respond to the need of drones across all sectors of the economy.

Minister Nzimande said TETA will continue to establish more partnerships with institutions in the post school system in order to include transport 4IR skills and occupations in their curriculum.

Wholesale and Retail Sector Education and Training Authority (W&RSETA)

Minister Nzimande said the Wholesale and Retail Sector Education and Training Authority (W&RSETA) is providing bursaries to the unemployed youth in 4IR occupations which includes Software Developer; Business Analysts and Computer network engineer; Systems engineer; Data Analyst; System Architect; Data Scientist; Programming; Cyber security, and Mobile Application Designer.

Services Sector Education and Training Authority (Services SETA)

The Services SETA conducted research studies to understand the impact of 4IR on the services sector workforce. Findings of these studies informed the Service SETA update of their Sector Skills Plan 2022/23 and the Annual Performance Plan 2022/23 targets.

“The Services SETA developed occupational qualifications and short skills programmes to address skills scarcity and offered the current workforce that may face redundancy due to 4IR second opportunities,” Minister Nzimande said.

The Minister also said the Service SETA also finalised and registered short skills programmes with the QCTO which includes Spatial Intelligence Data Scientist and Advanced Spatial Intelligence Data Scientist.

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