

**SPEECH BY MINISTER OF HIGHER EDUCATION AND TRAINING, DR B E NZIMANDE, MP, AT THE SEVENTH ANNUAL INTERNATIONAL SOUTH AFRICAN TECHNOLOGY NETWORK (SATN) CONFERENCE, 14 OCTOBER 2014**

**Date of the meeting:** 14 October 2014

**Venue:** Fairmount Zimbali Lodge and Resort, Umhlali, KZN

Chairperson of the SA Technology Network (SATN): Professor Mashupye Kgaphola

Members of the SATN

Invited guests

Ladies and Gentlemen

It is an honour for me to address you at this 7th Annual South African Technology Network (SATN) Conference. The theme of the conference is *Enhancing Teaching, Learning and Assessment Initiatives in Universities of Technology: Looking Back and going Forward*. Despite the enormous progress and changes made over the past 20 years, our institutional landscape is still, in many respects, reminiscent of the past, with disadvantaged institutions, and especially those in rural areas, still in need of infrastructure, teaching facilities and staffing. This focus on Teaching and Learning is timely and needed and it joins a growing number of initiatives aimed at addressing perhaps the most pressing challenge facing our institutions: the low throughput and high drop-out rates in our universities, which impact seriously on achievement in relation to graduate output and producing the skills needed in our country.

My Department's *White Paper for Post-School Education and Training* launched in November 2013 provides direction towards the creation of a single, coordinated post-school education and training system; a more cooperative relationship between education and training institutions and the workplace; greatly expanded use of flexible and blended teaching development modes; and a Department that provides leadership and coordination to the system as a whole and support for the different institutional types in the post-school system.

As stated in the *White Paper*, to enable this system, differentiation will improve access for all South Africans to various forms of educational opportunities, improve participation and success rates, and enable all institutions to find niche areas that respond to various national development needs. A differentiated system should provide a variety of modes of learning, learning programmes, and methods of teaching and assessment for diverse student bodies, and should support both flexibility and innovation.

### **1. The role of our universities of technology in the post-school education and training system**

Currently, universities are already differentiated to some extent, albeit inadequately, through varied institutional visions, missions, policies and practices within the context of the mission fitness of the institution and programme diversity - located in different contexts of diverse socio-economic challenges. The current programme tracks - career or vocational-specific, professional and general formative – should therefore be strengthened by the diversity of programme offerings specific to the institutional type as well as the continuum of different knowledge types and knowledge production. Institutions should be stimulated to develop their specific missions and programme profiles in order to be more responsive to societal needs and to create a diversified higher education sector in which different types of institutions co-exist.

The establishment of the Department of Higher Education and Training in 2009 signalled a bold commitment by government to provide a seamless transition between school and work, and at the same signaling a commitment to expand and diversify post-school education and training opportunities in a manner that breaks with a singular academic path that has been a key feature of our education system for decades.

Economic growth also increased the demand for skilled persons in the scarce skills areas that specifically relate to professional occupations. In essence the education, training and innovation system should cater for different needs and produce highly skilled individuals. These graduates should have the skills and knowledge to meet the present and future needs of the economy and society. Our mandate is to ensure that the skills needed to drive our country's economic growth and social development are delivered at an accelerated rate; to provide different entry points into, and pathways across the different learning sites, be it a

college, a university or the workplace. These skills include high-level research capability and innovation, and in this aspect we share a responsibility with our sister department, Science and Technology, who has the mandate to develop the research and innovation system.

Various challenges underpin the skills shortage – while these are generally known, it is worth reminding ourselves of the nature and the extent of the challenges we face. In the main, the issues include: the generally poor, and persistently inequitable, quality of basic education, particularly in relation to mathematics and science teaching; the poor throughput rates in higher education institutions and the changing nature and demands of the economy; the lack of opportunity for on-job training for graduates, which relates to the lack of companies to train, coach or mentor graduates; this lack of opportunity, coupled with a low number of work-based or work integrated learning opportunities during the course of study, leads to reports from many employers that our graduates are insufficiently prepared for work; relatively high levels of emigration for highly trained professionals, particularly in the health, engineering and veterinary sectors; and the scarcity of well trained and qualified academics in relevant areas.

In the light of the above, we therefore have to fundamentally rethink and reshape the role of our universities, including universities of technology in the post-school education and training landscape. I would therefore like to clearly spell out my Ministry's expectations of the role of universities of technology over the next five years and beyond.

### ***1.1 Addressing scarce skills especially at technician and technology levels***

Our country has an acute shortage of skills at mid-level and technician levels. The UoTs have a particularly important role to play in this regard, especially given the shortage of skills in engineering and other related fields. I am still seriously concerned with what I see as "mission" drift within our universities of technology with more emphasis moving towards degree programmes, including post-graduate and research programmes. Whilst I do not disapprove of offerings of degree and research programmes, but our UoTs still need to produce thousands and thousands of diplomates that are highly needed by our economy. If research is primarily also in support of the production of high quality mid-level skills then we need to strengthen such primarily for this purpose.

### ***1.2 Supporting and strengthening the TVET College System***

One of the most important roles for UoTs in the current phase of strengthening, expanding and diversifying the post-school education and training system is that of supporting the

Technical and Vocational Education and Training Colleges (TVET), otherwise still known as FET colleges. A critical dimension of addressing skills shortages in our country, as well as absorbing millions of out of school youth into education and training, is that of expanding, with improved quality, the TVET colleges.

The one concrete way through which we must absorb out of school youth is that of expanding the types of higher education certificates offered in TVET colleges with the support and collaboration of UoTs. For instance I am told that there are more than 50 different types of registered higher education certificates but there is increasingly less number of these higher education certificates that are offered by our UoTs. In fact we need more of these to serve a variety of purposes on our post-school education and training system. Some can be offered as both bridging into universities and diploma programmes in TVET colleges. Yet at the same time such higher education certificates could be an entry point into the workplace as lower level technical jobs.

Perhaps the most crucial role of UoTs, not delinked from the above, is that of creating an articulated system between the TVET colleges and the university system. We want a much more closely articulated system between TVET and UoT systems, and we are increasingly going to focus our funding for the system towards these. This is absolutely essential for the provision of a seamless system from school to college to university and workplace transition.

I would also like our UoTs to play a significant role in the training of TVET College lecturers that are able to offer high quality programmes that would also articulate easily with the university system. We are already piloting with some of our UoTs on the dedicated TVET lecturer qualification programmes.

### ***1.3 Work integrated learning and work placements***

It is absolutely essential that our UoTs continue to be in the forefront of forging a relationship between our educational institutions and the various workplaces. In particular our UoTs need to ensure that our students receive the necessary workplace experience required for completion of graduate studies or to fulfill requirements for graduation.

In the light of the above it is also very important that the relationship between the UoTs and the SETAs is actually strengthened. SETAs can play a very important role in facilitating a closer relationship between UoTs and employers.

It is also going to be very crucial that UoTs position themselves to provide some of the short-term and longer-term programmes funded and needed by many employers through the SETA and skills levy institutions in our post-school education and training system.

### ***1.4 Improvement of governance and administration in our university system***

One of the most persistent problems in our university system is that of poor governance and financial management of the resources increasingly in the hands of especially of our historically disadvantaged institutions (HDIs). We need better management of NSFAS, including better management of the billions of rands of funds earmarked especially for infrastructure.

A ruthless mechanism must be developed to deal with all forms of corruption, including dealing decisively with acts of corruption within our own ranks. We also welcome your focus on learning and teaching, a situation that still calls for more action.

WE also need a proper balance between institutional autonomy and public accountability; and also to ensure that institutional autonomy is not abused to shield corruption, racism and other forms of maladministration in our institutions. To help towards these we have also published a draft charter on social inclusion which I invite you to comment on.

### **Ministerial Statement**

Addressing these issues requires multi-faceted and complex responses.

I have just released the *Ministerial Statement of Student Enrolment Planning 2014/15 to 2019/20 for Universities* that concludes the enrolment planning process for this period. Specific institutional targets were set based on individual discussions with institutions. In line with my Performance Monitoring and Evaluation Target output 4: *Increasing access to high level occupationally-directed programmes in needed areas* with specific reference to projections for scarce skills areas relevant to universities of technologies the following can be noted in relation to planned increases in the number of graduates in specific fields: engineering graduates will increase from 9,714 in 2012 to 13,174 graduates in 2019 at an average annual increase of 5.5% from 2012 until 2019; life and physical science graduates will increase from 6,366 in 2012 to 8,252 graduates in 2019 at an average annual increase of 3.8% from 2012 until 2019; animal science graduates will increase from 554 in 2012 to 817 graduates in 2019 at an average annual increase of 5.7% from 2012 until 2019; veterinary science graduates will increase from 186 in 2012 to 270 graduates in 2019 at an average annual increase of 5.5% from 2012 until 2019; human health graduates will increase from 7,552 in 2012 to 11,113 graduates in 2019 at an average annual increase of 5.7% from 2012 until 2019; and teacher education graduates will increase from 13,734 in 2012 to 23,511 graduates in 2019 at an average annual increase of 6.0% from 2012 until 2019.

### **The Presidential Infrastructure programme**

In addition to these identified scarce skills areas is the Presidential National Infrastructure Plan consisting of the eighteen Strategic Integrated Projects (SIPs), which includes the building of two new universities and twelve new TVET college campuses, as well as various dams, roads, railway lines, energy generation, transmission and distribution facilities, and broadband. My department has started to identify the priority managerial and professional

occupations needed to direct, design and construct these major infrastructure projects. I have also established occupational teams for each of the identified occupations, consisting of representatives drawn from relevant employers, professional bodies and university faculties.

We however still have a long way to go before saying we have met our scarce skill targets, though we are making some breakthroughs. In the meantime we will also continue to import some of the scarce skills, but ensuring transferability to South Africans: and a number of additional strategies have been implemented to support and increase graduate output in scarce skills areas where needed. This included engagements with professional bodies to ensure that the required graduates are produced; and establishing a Joint Engineering Education Working Group between the Department and the Engineering Council of South Africa (ECSA) to ensure that engineering skills needs are addressed and that the quality is met. We also established (with the Department of Health), a Joint Health Sciences Education Committee (JHSEC), to discuss policy related to health sciences student education and training.

### **Specific interventions to improve quality of learning and teaching**

Equally important it is clear to note that achieving these increases will also require an enormous amount of attention to be paid to improving the teaching and learning processes and capabilities of our institutions. Student success requires attention; and throughput and graduation rates need to be increased and extra support should be offered to underprepared learners to help them cope with the demands of higher education. Adequate academic support to students need to be provided by means of foundation or extended programmes.

The option of a four-year university degree, combined with foundation courses and more support for universities to help students from disadvantaged backgrounds is still under consideration. Whilst on this point it is also important that we are considering the issue of NSFAS funding for the BTech degree, although we are funding all BTech programme in scarce skills areas like engineering as part of facilitating the production and professional engineering registration.

Earmarked grants, which include grants for Teaching Development, Research Development, Infrastructure Development and Foundation Programme, aim to bring about improvements in targeted areas of need and assist institutions in this regard.

The Universities of Technology are fully engaged in all of these grants, and have made some very important gains and improvements in terms of learning environments, staff qualifications, staff effectiveness as educators and researchers, the provision of appropriate entry level curricula, and suchlike. The following grants are of particular relevance.

The Research Development Grants aim to develop research capacity at universities amongst academic staff so that they can contribute to post-graduate teaching and to research output. In 2014/15, nearly R190 million was allocated for this purpose. South Africa's rapidly increasing research output is evidence of the expanding pool of researchers in our universities. An agreed focus of the Research Development Grants has been on increasing the number of staff with doctoral qualifications. The low percentage of academic staff holding the doctorate illustrates the challenge for the country in rapidly growing the numbers of doctoral graduates: in 2012, the figure for permanent staff was just over one third of academic staff (35.5%).

In addition, and more relevant to this conference is Teaching Development grants that aim to improve success at all levels of the educational process. They also focus to a large extent on building academic staff capacity as a means to the end of more effective learning environments. The very substantial investment of over R600 million a year has brought about significant innovations and enhancements in the teaching and learning area. Examples of these include: the development of 'First Year Experience' initiatives that take a holistic view of student needs in the often difficult transition from school to higher education; the establishment across the system of tutorial systems and mentoring support; large-scale attention being paid to academic literacy needs through the expansion of Writing Centres; and an increased focus on the development and use of African languages to support student learning. Student support funded through the Teaching Development Grant with allocations towards extended programmes, mentoring, tutoring, student advising, and a tracking system and associated training has the intention to improve student academic performance.

As stated in the White Paper, support for professional development and recognition of academic staff in the area of undergraduate teaching is generally weak. The challenge is multi-faceted, having to do with the ageing workforce, developments in higher education worldwide that demand ever greater levels of expertise from staff, the relatively under-

qualified academic staff workforce, low numbers of postgraduate students representing an inadequate pipeline, and the slow pace of regeneration and change on the part of the sector itself.

In response to this dire situation, the Department has built on previous investigations and international experience and is in the process of finalising a plan: *Staffing South Africa's Universities – a Comprehensive Approach to Building Capacity and Developing Future Generations of Academics* (SSAU). The plan takes as a starting point the urgent and challenging imperative to recruit, support and retain black and female academic staff to address their very serious under-representation at all levels in the sector. It also recognizes the need for more explicit attention to be paid to creating much wider awareness of academic work as a career that is both attractive and attainable for those with ability, and sets out, for new and existing staff, pathways through which staff can be effectively inducted and thus in time promoted.

An organisation such as the SATN which sets out to promote academic quality, improved mobility and employability of UoT graduates; and which aims to influence the development of national policies in relation to the nature and character of UoTs along with initiatives from the Teaching Development Grant Collaborative Programmes clearly lives up to its role of providing a forum to discuss higher education issues which includes the theme discussed today of teaching and learning.

It is clear that the SATN can make a very positive contribution to our country's efforts to roll out several ambitious initiatives designed to build the kinds of capacity in our higher education system that can help deliver high quality, relevant and effective graduates and meet national needs. My department looks forward to support members of the network in this regard.

I wish success with the conference, and trust that your deliberations and sharing of findings will further strengthen the quality of teaching and learning, research and innovation, and community engagement at your institutions.

Thank you