



## **SPEAKERS' CONTENT (HIGHLIGHTS)**

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**Prof Chris Nhlapo**

**Vice-Chancellor: Cape Peninsula University of Technology (CPUT)**

### **WELCOME AND SETTING THE SCENE**

- The Covid-19 pandemic taught us that the world's nations need to cooperate and collaborate much more – breaking new grounds together. The pandemic has irrevocably changed the very long-standing nature of higher education institutions, incl. the way universities teach; the way students learn; the modes of delivery; the format of learning material, etc.
- Covid positively catalysed and sped up the adoption process of enabling technologies and how we can collaborate better, esp. with regards to *smart internationalisation*. Universities across the globe can collaborate smarter by maximising a plethora of ICT innovations and other developments.
- Many world issues will increasingly require the collective wisdom of nations (e.g. around xenophobia; radicalisation; the globalisation of the labour market with the rise of remote job opportunities; the increase in trade wars in cyber tech; environmental changes, global warming, floods, droughts; and health issues).
- There is a growing shift in geopolitics of knowledge and universities need to be responsive by illustrating how narrow perceptions of local, national and global collaboration need to be expanded – esp. looking at this phenomenon through the lens of dual education.
- Higher education institutions fail to link internationalisation to societal issues: the social responsibility component of internationalisation has to date rarely been the focus of systemic thinking conceptualisation of strategy in the broad agenda of internationalisation of higher education and needs to be redressed.
- Limiting internationalisation only to the higher education community, anywhere in the world, is to miss its notable opportunities. Internationalisation has immense potential to help solve many social issues of relevance, locally and globally. A more systematic approach is needed that will leverage existing and new internationalisation activities to tackle local, regional and global social issues.
- The Dual Higher Education Project (DHEP) is building capacity to fully understand dual higher education and its associated benefits. For example: students have more training and research opportunities and are exposed to a spectrum of cultural perspectives and skills required for international research projects; students are well prepared for the job market; students learn hard and soft skills from more experienced co-workers as they develop under real working conditions; students are employed quicker, while consequently tackling the country's high unemployment rate.
- When students go through this particular mode, and as employees of a company from the beginning, they receive tasks according to their growing abilities. This also benefits academic staff because they regularly visit students at their

particular companies, and they develop specific relationships – i.e. establishing broader research networks, and gaining access to new knowledge, skills and resources that otherwise would not be obtainable.

- The impact for higher education, or the national system of innovation in South Africa, in particular, will include broadened research capacities, enhanced powers to recruit talented, work-ready students, and academics with a more visible and global research profile.
- There are also broader benefits for the State and local and regional governments, as well as communities, if aligned with their priorities. International collaboration involving graduate research and all education will directly benefit the State and local economies.
- Higher education should aspire to contribute to society and be relevant – having an impact on and to change humanity for the better. Dual higher education could be a system that can effectively provide huge savings for firms on recruitment costs, as they are aware of or invested in the skills of potential employees. It can be a major contributor to or driving force behind the country's economic progress and success – such as the case is for Germany, Austria and Switzerland. A highly skilled workforce can contribute directly to the improvements in production and civil delivery that we so need.

### **Mr Solly Fourie**

**Head: Department of Economic Development and Tourism (DEDAT), Western Cape Government**

***(On behalf of the Premier of the Western Cape)***

#### **KEYNOTE ADDRESS**

- The Western Cape focuses on educating and training for the competitive skills environment (in the economic context) to become globally competitive and compelling in its value proposition. Within the context of Western Cape government, the province has embarked on a post-Covid economic recovery plan, but many of its foundations are founded in the pre-Covid economic crisis. We do not always bring to mind that we've had a couple of years of economic challenges and low growth which impacts the ability of business to be able to absorb later.
- The Western Cape government has embarked on five key priorities to stimulate the economy of the province by 2025, and by doing so also the economy of the country:
  - *Make it easier to do business*: there are enormously constraining regulations at the moment that hinder businesses (large corporates and small business) to be able to function, to grow; many of our laws, legislation and rules around business need serious attention, specifically around limiting the ability to attract new labour into certain markets
  - *Boosting investment promotion and destination marketing*: exports attracting investments, but also on the tourism side (which has a significant challenge going forward).
  - *Enterprise development*: boosting small businesses, both formal and informal, presents the biggest opportunity for increasing employment going forward.
  - *Skills development*: having a pool of talented young people, which provides a compelling and competitive value proposition to investors and businesses going forward.
  - *Energy/economic resilience*: making sure that as we develop the economy, there's enough electricity to support it (although there are major challenges), but also develop enough water resilience in areas that still struggle within the province.

- We need to have very thorough understanding of the context of youth unemployment in South Africa – it is not just the demand for young people to be employed, but there are also significant challenges on the supply side. Investigating specific economic sectors that are particularly suitable for the absorption of young people and skills can potential clear a path forward.
- We have never had breakout growth in South Africa, and we need to address the reasons why. The economy took a massive dive because of Covid, and that is in itself is a challenge. We are not seeing significant growth over the short to medium term, and it is a concern. As young people leave our education systems, either post-school or coming out with a university degree, it does not appear the economy is going to have significant growth on current projections.
- (Un)employment is really a function of opportunities being created (or the lack thereof) for the willingness of people to go and look for jobs and the willingness of business to provide opportunities, and then the skills set with which those individuals come to the marketplace. We all come with “something to sell” within a market context, and that something is a *skills set* that must be the most compelling in order for the “buyer” to not be able to refuse it at relative value.
- Unemployment is not just a function of the challenge of socioeconomic issues, but it has a very definite *skills relation* in understanding how we need to equip people and how we need to move out of unemployment. Historically, the agriculture and finance and business sectors have absorbed labour in crisis times – and this has also been the case during the Covid period – whereas manufacturing and mining (of which there is very little in the Western Cape) there has been significant decreases.
- It is not just about the skills that are available, but it is also the emotion, the confidence that investors have to invest in an economy. Business confidence is an indicator of the appetite of businesses to want employ people and the right skill sets and therefore it is important to constantly be aware of where business is at and when they have an appetite to employ. This also strongly relates to *market sentiment*, e.g. when there is unrest (such as In July 2021 in Gauteng and KwaZulu-Natal) business confidence takes a knock.
- Even though the Western Cape has the lowest youth unemployment percentage (36.8%) relative to other provinces, it is still at an exceptionally high level, and we need to have programmes and projects in place to not only address the reasons for these high unemployment areas, but we also have to find solutions to enable a real reduction in these percentages. We need to follow those sectors that tend to employ more young people – e.g. the financial intermediation, insurance, real estate and business services sectors, but also transport, storage and communication.
- Three flagship programmes for the Western Cape government in this context (and which ties in with dual education) include:
  1. *Artisan development programme*: enabling young people in particular to get on-the-job training over a period of 18 to 36 months (3 years in total) through the combination of workplace and academic/theoretical training to become qualified.
  2. *Business process outsourcing (BPO) development*: largely aimed at matriculants going into a workplace through placements at firms/organisations, these young people gain access to workplace learning experience/opportunities with paid stipends, subsequently leading to an 80–85% take-up in permanent employment after the experiential learning course is completed.

3. *Work and skills programme*: aims to support economic sector-based programmes addressing the needs of unemployed young people and first-time entrance into the labour market, together with stakeholder involvement (training authorities, private sector and the national skills fund).
- It is of particular importance for the Western Cape to address the crisis of not-in-education, not-in-trading young people and making sure that there is support of a matching and integrated simultaneous supply-and-demand discussion within the broader labour market. On the supply side, more young people should become employable by improving their relevant skills and making sure that their basic education is supplemented with post-school qualifications. A talent pipeline should exist with technical and workplace-ready skills to access the job market.
  - Three bespoke post-school and/or higher education programmes that were established through a collaborative approach by the Western Cape government, universities and the private sector – which specifically focused on reskilling and/or upskilling unemployed graduates (mainly due to their original degrees qualifications) – include:
    - *Postgraduate Diploma in Software Development* at the University of the Western Cape (UWC)
    - *Postgraduate Diploma in Business Analysis* at the University of Cape Town (UCT)
    - *Postgraduate Diploma in Insurance and Financial Risk Management* at UCT
  - This type of project needs to be scaled up and we need to go much deeper, and in doing so, programmes and projects (such as the DHEP) cannot be done alone, but that all efforts need to be approached from a renewed strategic focus to increase the alignment between technical–vocational requirements and the skills that are developed (see e.g., the South African-German Chamber of Commerce collaboration). Skills on their own are not suitable for the workplace anymore, but *skills together with workplace experience* becomes a very compelling value proposition.
  - Recognition of prior learning is also very important – many people have the experience and have done the work, but they do not necessarily have the qualification to prove they can do the work (esp. in South Africa). Prior learning together with an academic qualification change people’s ability to be more employable and instil a willingness/drive to develop even further. They are also then enabled, in turn, to mentor young people in a different and more compelling way.
  - The South African-German Chamber of Commerce’s dual *logistics programme* aims to provide unemployed youth with the opportunity to become qualified in freight and logistics occupations related to industry requirements by encouraging employers to participate in the rollout and to host learners within the programme.
  - It is important for employers to become committed to participating in dual systems of learning in order to change the skills trajectory and the compulsion that employers and firms will have when they have a far more competitive and qualified workforce to be able to deliver in a quicker and easier way – making it easier for employers to improve their employment pool to by having young people committed already early on in the job (on-the-job training) and then moving in to that firm with an academic qualification.
  - The national government must continue to offer employers a tax incentive to lower the demands of the labour market and to enable firms to make it easier for them to employ young people. There are significant failures in the current system in the relationships between business and higher education institutions, and the gap needs to be closed. We need to talk frankly about our needs in the marketplace and our ability to match those needs.

- We do not have a lack of extraordinary, globally competitive academic institutions in South Africa, but what is needed – specifically from a Western Cape perspective – are those skills and abilities to come together with the abilities of business and to integrate to provide realistic and compelling skills sets for the workplace/marketplace. Those businesses themselves know exactly what is needed and there is nobody more equipped to educate, to train and to skill than the academic institutions.
- The academic institutions must be willing to adjust their curriculums to match the requirements that is in the workplace and our firms must be responsive enough to be able to open up and say, these are the requirements, let us work together to ensure that we get the skilling right.
- It is important to drive the partnership between industry and education so that our young people can have those opportunities that will make them more compelling for the workplace and enable a new way of skills provision. The time is right for us to move into that space and influence it.

### **Prof Dr Arnold van Zyl**

**President: Duale Hochschule Baden-Württemberg (DHBW), Germany**

#### **PLEDGE OF SUPPORT**

- The rapid societal, technological and demographic changes necessitate that we, as a higher education system, respond with graduates and research outputs that far better match the changing requirements of society and of employers.
- The dual teaching and learning system requires learning to occur both in the academic and workplace environment and typically involves four elements:
  - *A practical appreciation of the learning subject*
  - *A reflection on what has been seen and experienced*
  - *A theoretical underpinning*
  - *Considerations about how knowledge can be applied in the practical environment*
- This requires future employers to become members of the university to select and pay students, to co-develop the curriculum with academic staff, to teach the curriculum, but, most importantly, to create a quality assured and accredited learning environment within the workplace.
- In the German dual higher education system, the goal is primarily to increase and contribute to the competitiveness of the corporate partners and to engender an environment of innovation. This is done through the creation of knowledge partnerships locally, producing up to 10 000 graduates per year, research and innovation outputs through bachelors, master's and PhD work with other universities and, most importantly, it also produces continued education.
- In times of rapid change, it is not enough to simply produce a once-off graduate, you have to partner with the community and locally with companies to ensure that the rapidly changing knowledge is also conducted through to the companies.
- It is in the interest of the dual higher education system to as well to adapt this model in those dominions where similar corporate partners are also present internationally, through a range of academic partnerships worldwide. In Eastern Europe, especially, such dual study programmes have successfully been implemented with academic partners and German companies present in those areas. The implementation of these programmes in these dominions were not simply a direct copy of what has been developed in Germany.

- It is very important that these programmes are adapted to local conditions, but, in essence, the learning model needs to be maintained. During the last 10–15 years, four prerequisites for the successful implementation of these programmes have been identified:
  - The *willingness and the presence of a critical mass of companies* that are prepared to invest proactively in students: identify them, pay them, but most importantly, co-develop and teach curricula in an environment (the workplace) in which accredited and quality assured learning can take place.
  - A *critical cultural shift* within the academic partner(s) providing dual study programmes: it is necessary to acknowledge that the learning experience does not only take place in the “hallowed halls” of universities, but also in the workplace.
  - The *accreditation of relatively new and unconventional learning models* by State authorities: not only does the accreditation need to be agreed on, but it is also very important that the quality assurances of these programmes are really rigorously applied.
  - *Acquiring the necessary know-how*: the rotation of students moving between an academic phase, ensuring a synchronisation of the practical experience with the learning contents that have preceded them, and ensuring that all the accreditations and the quality assurances are in place is a complex process. *(This know-how can be made available to pilot projects in South Africa through Cooperative Education Consult GmbH as a subsidiary of DHBW.)*
- We owe it to students, as a higher education system, to ensure that they are adequately qualified for the workplace and that we do not graduate them into a situation where the take up is much better than we see at the moment.

### **Prof Dr Wolfgang Arens-Fischer**

**Head: Institute of Dual Study Programmes, Hochschule Osnabrück (HO), Germany**

#### **PLEDGE OF SUPPORT**

- The dual study program is unique in its form of learning in that continuous learning at two learning locations, at university and at practical institutions or companies, over the entire course of study is a change in the academic learning culture. It is a very special way to relate theories from academic education directly to practice in companies.
- The students use the practical experience in their companies to learn how the theory is applied in real life and, at the same time, the theory of the course is tested in practice for applicability and important inputs for the further development of scientific models and methods can be created.
- In this way, students get to know the fields of application of theories as well as their limits. This makes a dual study program an excellent model for developing skills and it is very popular with students and companies alike. Students appreciate the combination of science and practical experience, the development of skills and its good career prospects.
- Today companies use the dual course of study to recruit staff for basic training and for further human resource development, and for a long time now it has no longer been limited to the bachelor's level, but more and more dual master's programmes are being developed. This shows further growth potential for dual studies.
- In order to explore this and to further advance the knowledge of dual studies, the Association of Dual University Studies Germany was founded three years ago. The internationalisation of dual studies is also one of the tasks of the Association and an exchange of ideas between the Association and setting up dual studies in South Africa is encouraged.

- Dual studies are often limited to the area of students' competence development; focused on strengthening the employability, but that does not go far enough. The dual study program is an ideal model for knowledge transfer between university and business; between science and practical application. It often takes a relatively long time before the practical application potential of new knowledge is recognised and opened up for and by companies. Through the dual learning model, knowledge from the lecture hall is carried directly into the company, and this gives companies direct access to the latest knowledge from research and technology.
- Companies are continuously connected to universities through their students and thus have access to current developments. What is more, with the students, they have the people who can help to implement this knowledge into the company, e.g. to integrate and operate new technologies and products or production facilities. There is high economic potential within this model and also potential for innovations.
- The university itself also benefits from this because again knowledge of, e.g. new technologies, are transferred in real application. In order for this to work, however, the two learning locations in the dual study programme must really be related to each other. The interlocking of theory and practice is a key element and real success factor of the dual study programme.
- It is not enough to send students to companies, again and again every semester without explicitly asking them to transfer their theory to practice. This requires special didactic methods which are currently investigated in a nationwide study in Germany. In addition, the theory–practice transfer must be firmly implemented in each semester and there are different forms in which this can occur. For example: students can be asked to carry out the theory–practice transfer to each model of the course or special practice transfer projects for individual study sections can be carried out.
- In order for the dual study programme to develop its full potential, some other key factors must be considered in addition to the points presented by the previous speaker (*see Prof Dr Arnold van Zyl's four prerequisites above*):
  - The dual course of study must provide *methods and instruments* of how the theory from the course is systematically related to practice in the company. This does not happen by itself, it requires special learning arrangements.
  - The university must *support the students in the transfer of theory into practice*. To do this, there must be staff available at the university to advise and support both the students and the companies. (In this respect, dual study programmes can be more expensive than other forms of study.)
  - The companies must be *willing to participate in the theory–practice transfer* by giving the students the opportunity to do so, e.g. if a company enables students to be involved in practical processes and allows them to analyse and reflect on them.
- The success of these three factors leads to improved competence development and better employability of students, as well as improved knowledge transfer into companies.

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