

The value of TVET College and Industry collaboration for training artisans of the 21st Century

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Educators and industry players, generally operate in divergent worlds. Their networks and associations have few overlaps, resulting in limited understanding and appreciation for each other's operational reality.

The resulting chasm is particularly counterproductive in the TVET context. The TVET sector is expected to produce graduates equipped with technical and vocational skills that can readily be utilised in the "world of work". Additionally, the fast pace of technological development, requires agile curricula and delivery methodologies that are responsive to industry contexts. The value of TVET Colleges is thus increasingly dependent on partnering with Industry to train young people for the future. This is necessary to ensure significant, practical workplace exposure in order to produce graduates that are suitably qualified for 21st century work contexts.

A solid foundation of continuous exchange, networking and dialogue between TVET and Industry stakeholders, creates a better understanding of workplace contexts. It builds relationships of trust and the motivation necessary for joint collaboration. Such relations create a better understanding of how new technologies, digital solutions and other innovative approaches, can enhance productivity. Utilisation of these smart technologies, aligned to the needs of the 4th Industrial Revolution (4IR) are a necessary condition for industry growth and increased competitiveness.



Team Einstein presents their business idea to the audience. From left are Johan Bester, Vijayen Naidoo and Ayanda Dodo

In the period October - November 2018, two STEM (Science, Technology, Engineering and Maths) Summer Schools were held. These were jointly co-hosted by Industry, in the form of the Electrical Contractors Association of SA, and the Public Sector, represented by DHET and TVET College stakeholders. The summer schools were supported by the GIZ, through the offering of the SD4GE (Skills Development for a Green Economy) programme to apprentices,

within the Dual System Pilot Project (DSPP). The theme for the summer schools was "DSPP goes Digital". Apprentice employers acknowledged the significance and value of the exposure provided by the summer schools to pioneering innovations. The participating employers therefore readily released their apprentices to participate in the STEM summer schools. Such concerted action between public and private stakeholders, is critical for preparing apprentices for employment and self-employment prospects.

Forty apprentices from the first intake of DSPP electricians spent one week on the Summer School training which focused on future digitalisation challenges and opportunities. In the course of the training, apprentices were exposed to 4IR case-studies related to Mining, Manufacturing, Agriculture and Services contracting. There were also practical exercises involving Internet of Things (IoT), sensors and related technologies. Participants were introduced to companies utilising digital technologies. A competition to create IoT-enabled service offering for clients related to risk management, convenience, energy sustainability and community support, was introduced. Change Management relating to adaptation in a networked age, was also discussed.

Following the training, apprentices were able to understand the scope of application of digital solutions. They presented ideas and business models, based on what they had learnt at interactive "Snack and Chat" events. These were attended by more than 100 guests from Industry and Government. Participants eagerly showcased key insights gained on digital transformation and the IoT. The training served to highlight the opportunities these developments present for them as future electricians. The summer school further confirmed the value and the aspirations that such exposure to the "world of work" presents.



Mpumelelo Nkomo prepares for the business case competition