

**Presentation by:  
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**“The perspective of TVET  
Colleges in providing the skills of  
the 21<sup>st</sup> century”**

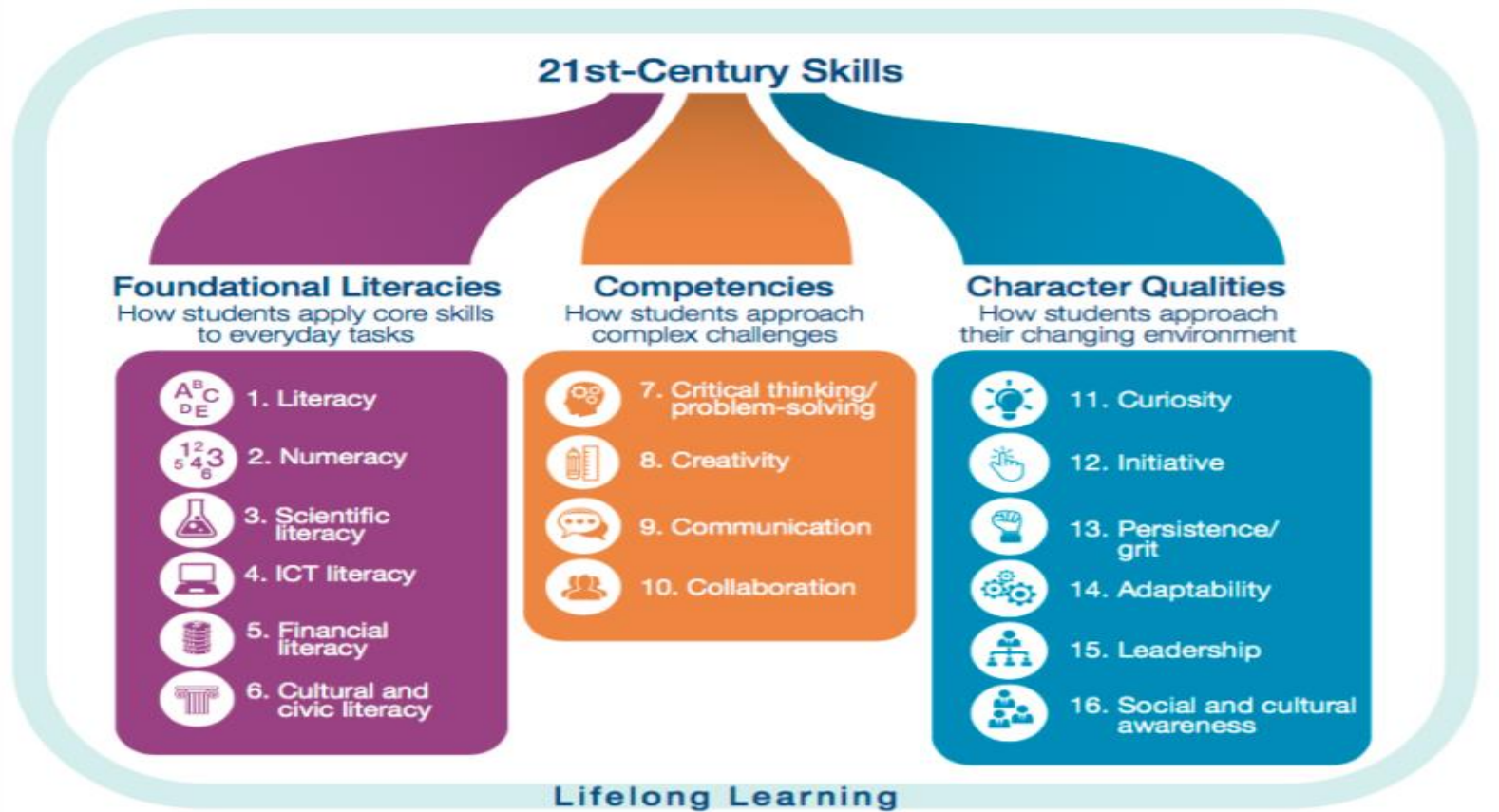
# PRESENTATION OBJECTIVES:

- ❑ CURRENT PROGRAMME OFFERINGS AT TVET COLLEGES
- ❑ 21<sup>ST</sup> CENTURY SKILLS
- ❑ DEVELOPING A HOLISTIC LEARNER
- ❑ DEVELOPING AN INTEGRATED CURRICULUM TO INCLUDE 21<sup>ST</sup> CENTURY SKILLS
- ❑ STRATEGIES TO ALIGN TVET CURRICULUM
- ❑ SKILLS ALIGNED TO WORLD SKILLS
- ❑ ENTREPRENEURSHIP
- ❑ WORKPLACE BASED LEARNING
- ❑ COVID 19 IMPACT ON ACHIEVING 21<sup>ST</sup> CENTURY SKILLS OBJECTIVES

# “Current Programme Offering at TVET Colleges”

- ▶ TVET Colleges currently offer the following Programmes that are Ministerial Funded:
  - ❑ NATED
  - ❑ NCV
  - ❑ PLP (PRE-VOCATIONAL LEARNING PROGRAMME)
- ▶ TVET Colleges also offer Occupational Programmes that are funded through Industry, SETA, NSF, Public Sector and other funding Agencies:
  - Learnerships
  - Skills Programmes
  - Apprenticeships
  - QCTO Qualifications including Centers of Specialization

# “21<sup>st</sup> Century Skills”



# Developing a Holistic Learner

## Learning Skills



critical thinking



creativity



collaboration



communication

## Literacy Skills



information



media



technology

## Life Skills



flexibility



leadership



initiative



productivity



social skills

# Developing an Integrated Curriculum to include 21<sup>st</sup> Century Skills

- ❑ TVET Colleges implements a curriculum that is guided by the DHET (NATED AND NCV).
- ❑ TVET Colleges must therefore adapt and integrate the curriculum to develop the learner holistically.
- ❑ This includes employability skills linked to the labour market where there are gaps in the curriculum.
- ❑ Other skills includes technological skills, job readiness skills (prepare a learner for the workplace) and entrepreneurial skills.
- ❑ A student must be holistically developed with learning skills, literacy skills, life skills, foundational skills and key competencies and characteristics to be able to enter the labour market or self-employment.

# Strategies to align TVET Colleges Curriculum to 21<sup>st</sup> Century Skills

- ❖ Industry experts represented in Governance structures including College Councils.
- ❖ Industry Experts represented in Academic Board Structures.
- ❖ TVET Colleges establishing Industry training boards that are sector based.
- ❖ Guest Lecturers invited to TVET Colleges to lecturer on latest technological advancements in industry.
- ❖ Colleges collaborating with Industry through stakeholder engagements including seminars, workshops, career exhibitions etc.

# Strategies to align TVET Colleges Curriculum to 21<sup>st</sup> Century Skills

- ❖ Colleges developing Soft Skills Training, Job Readiness Programmes, Entrepreneurial Development Programmes and Employability Skills Programmes.
- ❖ Lecturer Capacitation through lecturers placed in industry for workplace exposure or other HRD strategies.
- ❖ Embedding the World Skills standard and norms into TVET Curriculum.
- ❖ Students placed in industry for Workplace Based Learning.



# Including World Skills to TVET College Curriculum

- World Skills builds confidence, empowers communities, and helps to fuel economies.
- Skills create opportunities and connect societies. They are the foundation of economic progress.
- TVET Colleges can use the World Skills Occupational Standards and incorporate into the mainstream curriculum.
- This can improve throughput, pass rates and more importantly enhancing the employability of the learner.

# ICT AND TECHNOLOGICAL SKILLS TVET COLLEGES CAN OFFER IN 21<sup>ST</sup> CENTURY



3D DIGITAL GAME ART



CLOUD COMPUTING

# ICT AND TECHNOLOGICAL SKILLS TVET COLLEGES CAN OFFER IN 21<sup>ST</sup> CENTURY



INFORMATION AND  
NETWORK CABLING



CNC MILLING AND  
TURNING

# ICT AND TECHNOLOGICAL SKILLS TVET COLLEGES CAN OFFER IN 21<sup>ST</sup> CENTURY



IT NETWORK SYSTEMS  
AND ADMINISTRATION



MOBILE ROBOTICS

# MECHANICAL RELATED SKILLS IN 21<sup>ST</sup> CENTURY



MECHANICAL  
ENGINEERING - CAD



MECHATRONICS

# MECHANICAL RELATED SKILLS IN 21<sup>ST</sup> CENTURY



AUTO BODY REPAIR



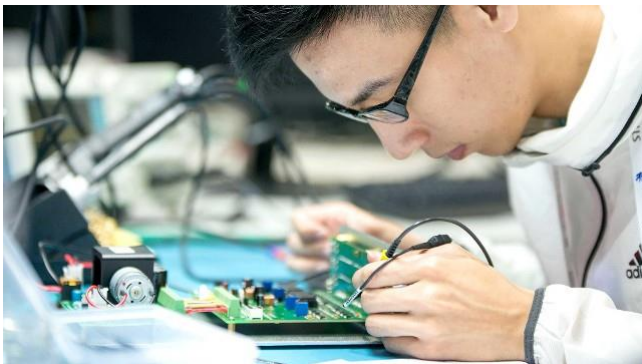
AUTO MOBILE  
TECHNOLOGY



# ELECTRICAL RELATED SKILLS IN 21<sup>ST</sup> CENTURY



ELECTRICAL  
INSTALLATIONS



ELECTRONICS

# CONSTRUCTION AND BUILDING TECHNOLOGY SKILLS



CONCRETE  
CONSTRUCTION  
WORK



BRICKLAYING



# 21<sup>st</sup> Century Skills in Agriculture that TVET Colleges can offer in curriculum



AQUAPONICS AND  
HYDROPONICS



DRONE  
TECHNOLOGY

# CENTRES OF SPECIALIZATION – LINKED TO 21<sup>ST</sup> CENTURY SKILLS

- Skills Development Initiative that Aligns to and supports the Artisanal skills needs of Industry and the Economy at large.
- A skilled and capable workforce to support an inclusive growth path.
- Dual system training of Apprentices. Developing a holistic Artisan.
- Contribute to skills needed for Economic Reconstructive and Recovery Plan.
- Contribute towards the building of the capacity of public TVET College system to deliver occupational trade qualifications with employers as partners.

# KEY FEATURES - CENTRES OF SPECIALIZATION – LINKED TO 21<sup>ST</sup> CENTURY

'Dual system' Occupational Qualification apprenticeships that combines

Theoretical **education** at a TVET college applied with..

Simulated **practical training** in college workshops and...

Integrated with lots of authentic **work experience**

In a **single, seamlessly combined & delivered learning programme**

# CENTRES OF SPECIALIZATION – KEY 13 TRADES LINKED TO 21<sup>ST</sup> CENTURY SKILLS

- Plumber
- Automotive
- Rigger
- Millwright
- Boilermaker
- Electrician
- Diesel Mechanic
- Welder
- Pipe Fitter
- Bricklayer
- Mechanical Fitter
- Fitter and Turner
- Carpenter and Joiner



# Including Entrepreneurial Skills to TVET College Curriculum

- *TVET Colleges can support students through the following Entrepreneurial Objectives:*
- To assist potential and existing student entrepreneurs in establishing their businesses
- To give advice, mentorship and support to students
- Provide resources needed in the establishment and sustainment of potential businesses
- To provide entrepreneurship and business management training for students both Engineering and Business Related
- To provide continuous technical and conceptual support
- Incubation of potential entrepreneurs

# Workplace Based Learning as Exit Strategies

- *Partnerships with industry for Workplace Based Learning.*
- *Industry providing mentors to develop the learner and provide guidance and support.*
- *Practical workplace training will ensure that the learner is fully developed to be employable or self-employment.*
- *Colleges partnering with SETA'S for Workplace based interventions.*

# COVID 19 Pandemic and the need for 4IR

- The Fourth Industrial Revolution is now impacting TVET Colleges and generally both Basic and Higher Education more than ever.
- The COVID-19 pandemic has affected educational systems worldwide, leading to the near-total closures of schools, universities and colleges in 2020 and with Alert levels, the rotation of students at schools and colleges.
- Teaching and learning is moving online, on an untested and unprecedented scale.
- Support from Higher Health to ensure COVID 19 protocols are adhered to a implementation of a business continuity plan.
- TVET College lecturers have to therefore adapt to a more diverse methodology of teaching and learning which places tremendous reliance on technology.

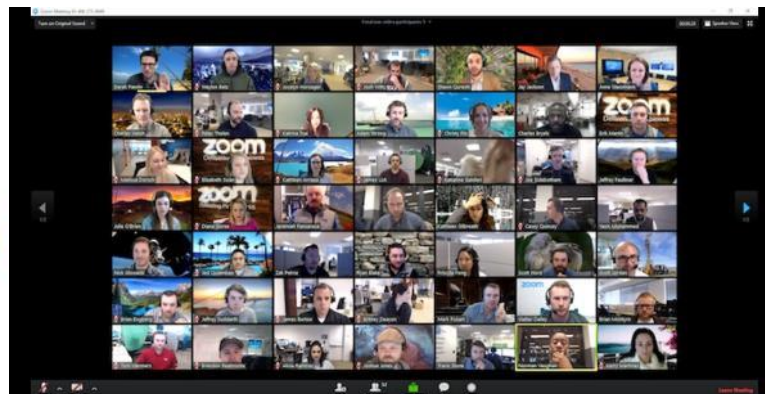


# TECHNOLOGIES USED BY LECTURERS DURING COVID 19 PANDEMIC

- ❖ Mobile Learning e.g. creating WhatsApp group or use of I pads, laptops etc. with students and delivering curriculum. Marking of activities given. Uploading presentations, videos etc.
- ❖ Videoconferencing Classroom **Technologies**.
- ❖ Posting of videos and presentations on college websites or Social Media Pages for students to view.
- ❖ Use of Webex, Skype, Zoom or Microsoft Teams to present lecturers.
- ❖ Negotiating with Telecommunication companies for reasonable rates on data and zero rating of data for educational programmes or materials.
- ❖ Colleges have developed portals (Learner Management System) to facilitate distance learning. Students affected by COVID 19 Pandemic can become part of the classroom using video technology and shared computing resources.



# TECHNOLOGIES USED BY LECTURERS DURING COVID 19 PANDEMIC



# Impact of COVID 19 on TVET Skills and Training

- Colleges to fund a business model for online and remote learning.
- Colleges are required to set up a remote learning team which requires HR and Financial resources.
- Implementation of a dedicated Learner Management System to support remote learning. Challenge of access to Laptops, Data etc.
- Impact of students placed for Workplace based learning with companies downsizing or closing down due to the COVID 19 Pandemic. This impacts on the access to workplaces for students for WPBL.
- Decrease in SETA Funding due to reduced Skills Development Levy contribution by companies as a result of COVID19 Pandemic.

# Thank you

Comments/Questions