REMOTE TEACHING AND LEARNING SOUTH AFRICA

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SOUTH AFRICAN CONTEXT AND COVID-19

- **The COVID pandemic was a catalyst for digital transformation.**

- A mostly unprepared college sector had to make contingency plans to support learners and keep learning going under very difficult conditions

- Our society is characterised by high levels of inequality and poverty.

- Connectivity, appliances and other affordances needed for study not readily available

- Whatsapp platform does not lend itself to volumes of information, the small screen is difficult to manage.

- Those unable to access and use technology may be increasingly disadvantaged

- Many learners struggled to continue learning at home because at a basic level they could not cope – home not conducive to studying

- Learners struggle with maintaining engagement in digital courses, due to lack of a supportive context, previous experience and / or adequate instructional methods.

- The transition from face-to-face to distance and blended learning was difficult for students and teachers.

IPSS
INSTITUTE FOR POST-SCHOOL STUDIES

COLLEGE AND LECTURER PREPAREDNESS FOR ON-LINE LEARNING

- **Lecturers experienced similar conditions to learners**; finding a quiet space to engage with learners difficult

- Colleges had varying levels of access to affordances like data and devices for their lecturers

- Some also could not afford resources needed to work from home.

- **Limited Colleges (20%) had facilities to accommodate virtual learning platforms**

- Students struggle to read and interpret information on their own, without content being mediated by a lecturer

- Some students are to immature to take responsibility for their own learning, need guidance by lecturer.

- Anxiety about the accessibility of content for students and readiness for the exams

- Nervous about using the technology and feeling inadequately prepared for what the college was expecting from them

- Anxious, lost, confused, scared, frustrated, unrealistic expectations of the college management, unprepared, pressured, rushed, daunted by technology

# RESPONSE TO THE CHALLENGES FACED

- Currently rolling out a large scale connectivity project. Started pre-COVID and is nearing completion

- Student financial aid provided laptops to all their students benefitting from their support

- Policy developed for lecturer Laptops

- Lecturer skills development on a number of fronts

- TVET College websites have been zero rated – college websites used to place learning material and digital content for students

- During COVID many publishers have uploaded DHET content on their web sites free of charge

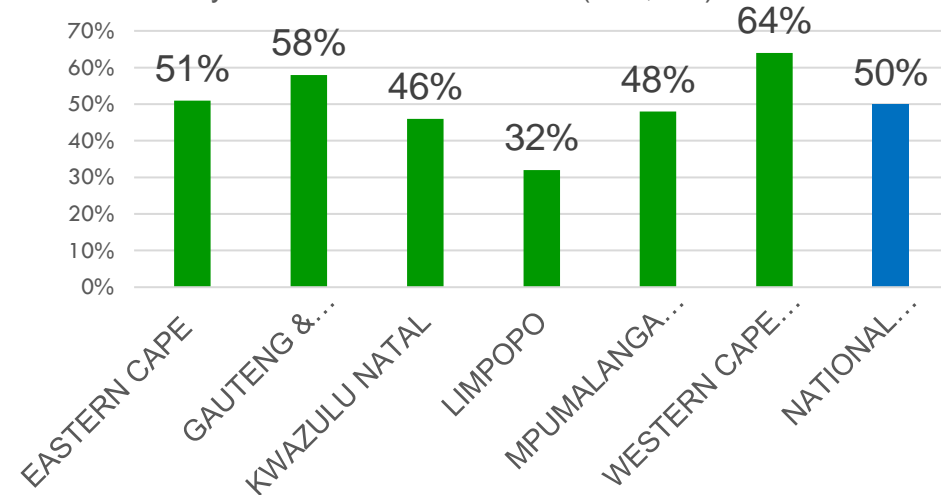- You tube was used as a platform but not extensively due to cost

Joy as NSFAS students to receive laptops on Sunday

DATA COLLECTED IN SEPTEMBER 2021: STUDENTS

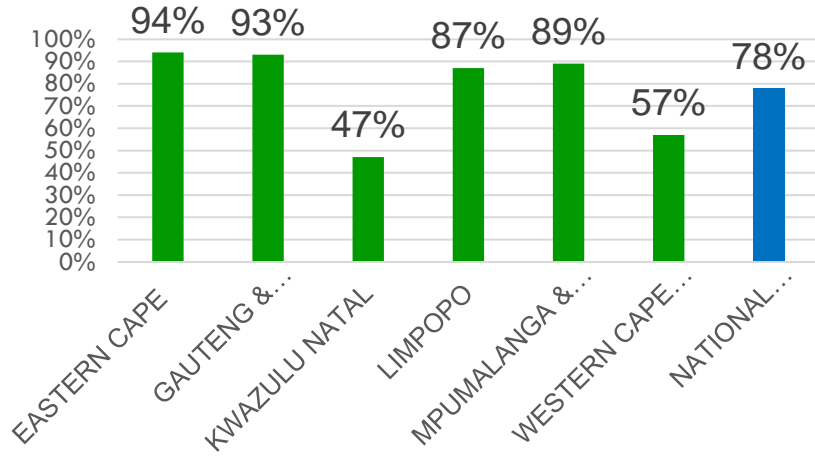% Students with laptops provided by NSFAS or college
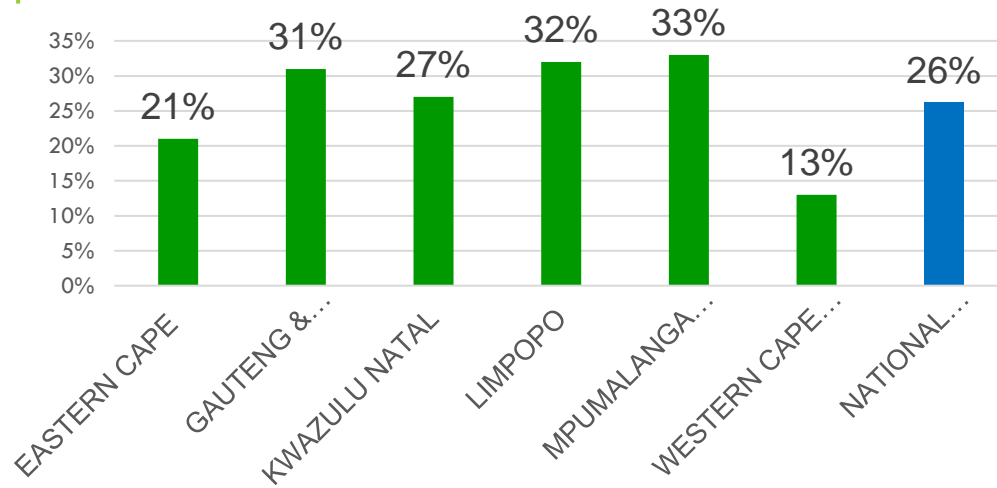
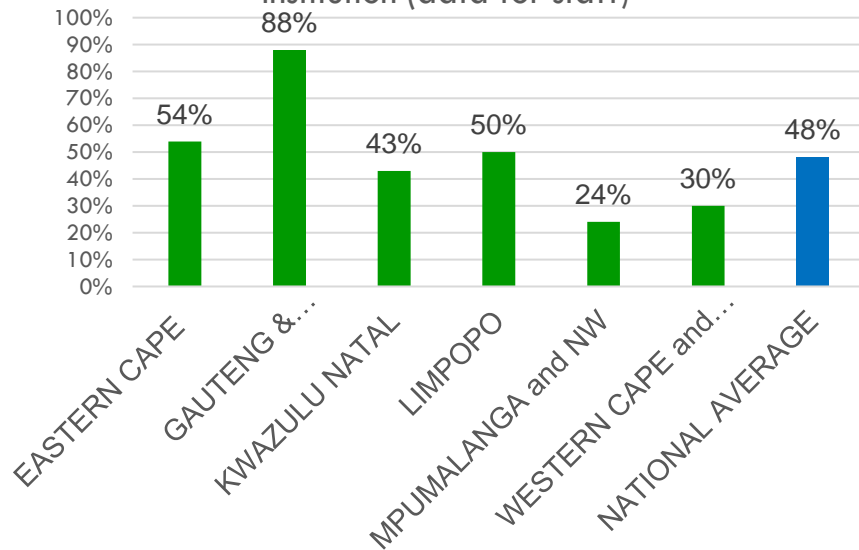% Connectivity of students at institution (Wifi, etc)

- A survey was conducted with Principals of Public TVET colleges the following was recorded:

- 26% Financial Aid students have received laptops
- 50 % of students have connectivity on campus

- Still large gaps between provinces and colleges.
- Uneven connectivity across urban and rural campuses

Data Collected through regional DHET structures across all public colleges and synthesised by Dr. Nick Balkrishen; as presented at South Africa Open Learning Colloquium in September 2021.

DATA COLLECTED IN SEPTEMBER 2021: LECTURERS

% Academic staff with laptops provided by the college

- Not All academic staff have access to laptops, although huge shifts have been made
- Academic staff do not have connectivity away from the campus (Only 48% have
- Significant increase in blended and open learning from 2019 to 2021 (30% increase)

% Connectivity of academic staff away from institution (data for staff)

Blended Learning in TVET Colleges 2019-2021
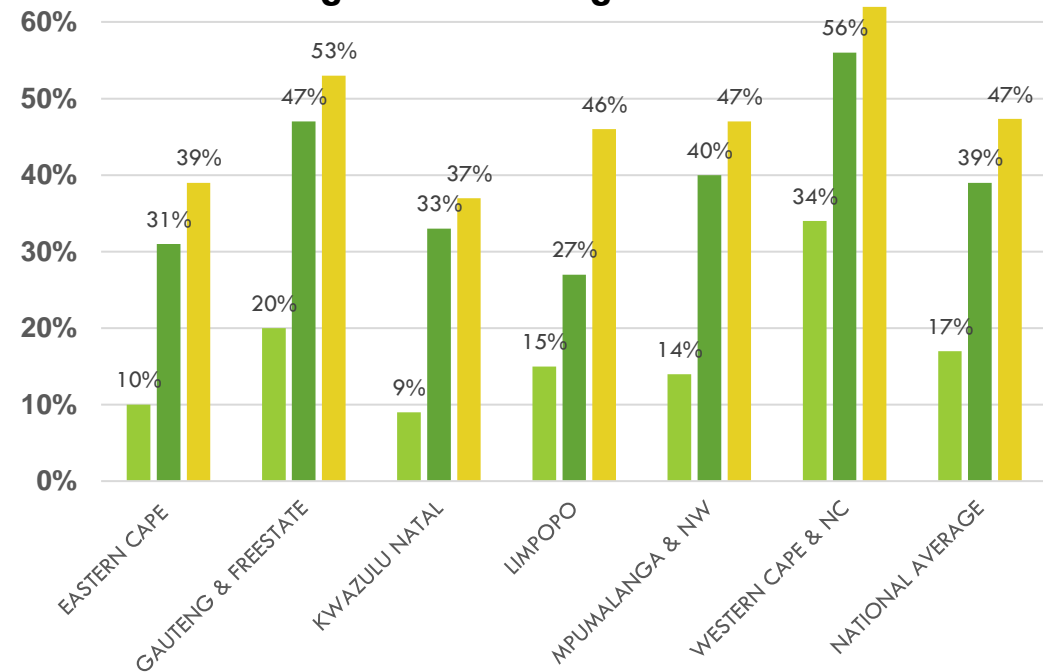
REMOTE TEACHING & LEARNING MICRO COURSE SERIES

- Four modules (micro courses) and was planned to provide a foundation for a Massive Open Online Course (MOOC), using mainly asynchronous learning.
- Participants worked through pre-recorded presentations/lectures by themselves, discussed questions and work assignments with the trainer in real time during mentoring sessions and via asynchronous communication.
- The didactical approach followed an alternating structure of input sessions via learning videos, self-working phases and regular synchronous live video calls at the beginning of each of the four micro courses.
- Self-working phases gave the participants the opportunity to work through the teaching material self-paced.
- To ensure proper use of the technical components an assessment of participants' ICT skills and environment was conducted.

- The training used the following main :

- Input sessions, lectures, theoretical introductions via videos
- Discussions via video call, chat, e-mail and messenger service
- Presentation of work assignments, assessment and feedback

Microcourse 1
Basic introduction to Remote Teaching & Learning

Microcourse 2
Digital didactics
Planning and structuring Remote teaching & learning activities & assessments

Microcourse 3
Working with selected digital tools

Microcourse 4
LMS systems and features

REMOTE TEACHING & LEARNING MICRO COURSE SERIES

- A group of 15 participants achieved 90 percent of the score. These participants were identified as high potential master trainers.

- Learning videos were watched to a satisfactory level but the self-working elements were not done by all participants.

- Course evaluation was positive. Learning content and topics were well-selected, interesting, and relevant.

- During the 2 months course a constant decline of engagement was measured.

- The online learning methods were appropriate. MS Teams worked satisfactory, low quality hardware a problem in some cases.

- Pre-recorded learning videos supported the self-organization of the learning process.

- Participants with insufficient internet connections were given data packages. Problems accessing course content due to IT-administrative restrictions at their workplace computers or a lack of ICT skills and experience.

Recommendations

- Improve retention rates by shortening course to one month, 80 hours was not achievable.

- Planned future MOOC course should be certified by an institution and conducted as a compulsory course.

- Incentives for participation should be considered.

- Break longer videos down into several shorter videos

- Participants are required to have sufficient internet coverage and access to computers.

- Basic ITC skills are recommended.

EXAMPLES OF SUCCESSFUL TRAINING INTERVENTIONS

Project-Based Teaching and Learning

- Project based training for technical content plumbing and electrical interrupted due to COVID but continued in a on-line and virtual format.

- Offered a real world and Project-based methodology

- Simulated scenario was presented first on screen virtually reality. This allowed for planning and preparation of the task.

- Virtual discussions on the task and assignment

- Face-to Fact training done on a "Wendy house" located at a college for implementation.

- Very successful intervention now being scaled up.

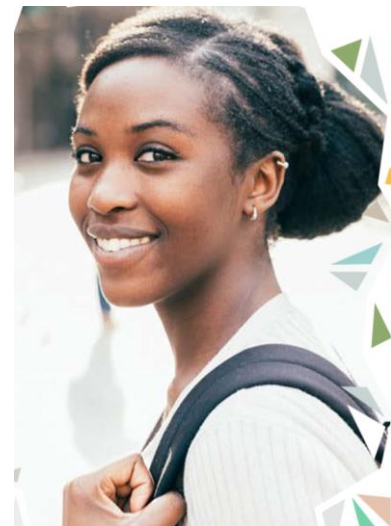## Remote teaching and learning for TVET teachers

- Future-orientated, practice related lessons with topics of industry 4.0 combined theory with practice in the fields of mechanical and electrical engineering

- Mechanical and electrical lectures working together in a joint project.

- Interdisciplinary teaching - Didactics are included in practical lessons.

- Master trainers trained to support the next cohort of students

- Very successful training also being scaled at the moment

TRAINVE
Modular training and further education of South African
TVET-lecturers in mechanical and electrical engineering

WHAT THE FUTURE HOLDS . . .

- Open learning unit created in the Department, developing and distributing digital content through a digital learner management platform

- The social consequences of the 4IR will demand much larger-scale access to education and training opportunities (Skilling and Upskilling)

- Education and training opportunities must be supported through open learning relevant in the context of a rapidly changing world of work;

- Access to high-quality educational opportunities that meet immediate demand for 'digital skills' in the labour market created by the 4IR;

- Massive increases in short-course skilling opportunities for unemployed and underemployed South Africans in parallel with wider government and private-sector efforts to rapidly grow new employment opportunities for those people;

- Curricula and educational programmes that are responsive to the accelerating pace of technological change and the world of work;

- Blended teaching methodologies must be considered and will probably remain in the future

- Social partners work together to develop human-centred solutions that consider the needs of the most vulnerable

- Educational that enable much greater flexibility (how and where students access learning opportunities

- Accreditation systems that allow students to accumulate 'stackable micro-credentials' and recognition of learning outside formal national qualifications

THANK YOU…..