EMPOWERING TEACHERS TO USE ICTS IN SOUTH AFRICA

GLOBAL DIALOGUE ON ICT AND EDUCATION INNOVATION, MOSCOW, RUSSIA, 18-19 APRIL 2018
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PRESENTATION OUTLINE

- Purpose
- Background
- ICT Professional Development
- Incentivising Teachers
- ICT Training Stats
- Professional Development Framework for Digital Learning
- ICT4Red
- Challenges and Remedial Measures
PURPOSE

To present to the Global Dialogue on ICT and Education Innovation the Operation Phakisa ICT in Basic Education initiative on Teacher ICT Capacitation.
BACKGROUND

• **Operation Phakisa** ("hurry up") ICT in Education is a project management protocol adopted from Malaysia, derived from their Big Fast Results (BFR) eight-step methodology.

• **A consultative laboratory process (Lab)** was held in October 2015 attended by 120 delegates.

• **Ten initiatives** were identified, one of which was a recognition of the need to capacitate teachers to use ICTs in education, particularly in integrating in classroom practice.

• **SACE** is the South African Council of Educators. SACE sets the standards for teacher training. Teacher training is carried out mostly by Universities and other Higher Education Institutions (HEIs).
The diagram indicates the different levels of ICT teacher professional development.
Entry level
The teacher is computer literate and is able to use computers. However, frustrations and insecurities are common in the introduction of ICT. At this level, teachers are likely to lack confidence.

Adoption level
The teacher is able to use various ICTs, including computers, to support traditional management, administration, teaching and learning, and is able to teach learners how to use ICT.

Adaptation level
The teacher is able to use ICT to support everyday classroom activities at an appropriate NCS level, assess the learning that takes place and ensure progression. He/she is able to reflect critically on how ICT changes the teaching and learning processes and to use ICT systems for management and administration.

Appropriation level
The teacher has a holistic understanding of the ways in which ICT contributes to teaching and learning.

Innovation level
The teacher is able to develop entirely new learning environments that use ICT as a flexible tool, so that learning becomes collaborative and interactive.
## ICT PROFESSIONAL DEVELOPMENT

### Sample ICT school based Teacher Training Plan

<table>
<thead>
<tr>
<th>Basic Use</th>
<th>Integration</th>
<th>Advanced</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic MS Word/PPT</td>
<td>LMS Use / Monitoring</td>
<td>Development of digital solutions</td>
</tr>
<tr>
<td>e-Content for Interactive Projection</td>
<td>Classroom Management</td>
<td>• Active Learning</td>
</tr>
<tr>
<td>Open Edu Resource Access</td>
<td>Content creation</td>
<td>• Math Academy</td>
</tr>
<tr>
<td>Introduction to 21st century skills &amp; Digital Citizenship</td>
<td>Assessment</td>
<td>• SPARKvue Science Probes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 3D Visualization</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Curriculum Matrix (OER)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Virtual Lab</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Digital content development</td>
</tr>
</tbody>
</table>
Through the **National Teaching Awards (NTA)**, Technology incentives are being given to teachers and schools to encourage them to embrace the use of ICT for teaching and learning.

A set of **best practice presentations** are made available to teachers and managers on how to integrate ICTs in management, teaching and learning.

Pre-service teachers training in higher education institutions includes basic ICT literacy and basic ICT integration into teaching and learning.
<table>
<thead>
<tr>
<th>Province</th>
<th>Total 2016/2017</th>
<th>2016</th>
<th>2017</th>
<th>Grand Total</th>
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<td>4189</td>
<td></td>
<td>8602</td>
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<tr>
<td>Free State</td>
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<td></td>
<td>0</td>
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<tr>
<td>Gauteng</td>
<td>1723</td>
<td></td>
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<tr>
<td>Kwa-Zulu Natal</td>
<td>1942</td>
<td>259</td>
<td></td>
<td>2201</td>
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<td>Limpopo</td>
<td>1000</td>
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<td>1600</td>
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<td>Mpumalanga</td>
<td>18637</td>
<td>5846</td>
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<td>Northern Cape</td>
<td>4038</td>
<td>526</td>
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<td>4564</td>
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<td>North West</td>
<td>1938</td>
<td>374</td>
<td></td>
<td>2312</td>
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<tr>
<td>Western Cape</td>
<td>38564</td>
<td>5439</td>
<td></td>
<td>44003</td>
</tr>
<tr>
<td>Total</td>
<td>81295</td>
<td>17233</td>
<td></td>
<td>98528</td>
</tr>
</tbody>
</table>
Professional Development Framework for Digital Learning

South Africa’s Version of UNESCO ICT Competency Framework

Who it is for
Professional Development Framework for Digital Learning

Competencies, Indicators & Examples

3 Broad competency groups

13 Competencies

51 Indicators that competencies have been achieved

200 Examples to support achievement of indicators
Professional Development Framework for Digital Learning

Supporting resources

1. Toolkits
   - District
   - School
   - Teacher
   - HEI

2. Apps for
   - Windows,
   - Android & iOS

3. Self-evaluation tools
   - Teachers
   - SMTs
   - Schools
   - Districts
   - Lessons
   - Courses

4. Database of activities

What supporting resources does it offer?

Intended outcomes...

- Education leaders with a plan for PD
- Teachers prioritize PD needs
- Learners achieve curriculum goals
- Endorsed PD activities
- New teachers as digital learners
Professional Development Framework for Digital Learning

2016
- Expert reference group
- Centre Managers & eLearning Specialists

Draft

Consult
- Curriculum Branch
- HEIs
- PEDs
- SACE
- TDCM x 3

Approve
- TDCM
- Senior Management
- HEDCOM
- CEM

Advocate
- Provincial roadshows
- Providers of TPD
- SMTs
- Teachers

Implement
- 2018+
- Build competence and capacity
- Work with system partners, PEDs & Districts
- Working with DHET
- HEI course integration
SACE AND HEIs
Currently, SACE is being engaged to:

- Standardise ICT in teacher practice courses for HEIs, so that all teachers across the country acquire the same skills.
- Provide an online MOOC for ICT integration courses (integrating ICTs in teaching and learning).

Currently only 6 of the 14 major HEIs offer ICT in teaching and learning courses of trainee teachers.

- However, DBE aims to remediate this matter by first developing standardised courses and
- Getting SACE to approve them and
- Promulgating them e.g. on the MOOC.
ICT4Red
ICT4Red was a project run by the Council for Scientific and Industrial Research (CSIR) under the auspices of the Department of Science and Technology (DST) and in partnership with the ECDOE and DBE.

- **Stands for ICT for Rural Education**
- **Delivered tablets**, training and connectivity to schools
- Through their **TECH4RED** project (technology for Rural Education), delivered sustainable power supplies and sanitation.
- **Teacher ICT courses** included a range of **techniques** to integrate ICTs in the classroom including the flipped classroom, rewards for attending courses; including micro-accreditations for course components.
- Teachers were given tablets and only allowed to have them if they completed the training (**earn while you learn**)
- **https://ict4red.co.za**
Tablet care

Always wash your hands before you use the tablet.

Always carry the tablet with two hands.

Handle the tablet carefully – don’t throw it or drop it.

Don’t leave the tablet in the sun, rain or in the dust.

Share the tablet with your friends when the teacher asks you to.

Don’t eat or drink near the tablet.

Don’t run Apps without your teacher’s permission.

If you see this symbol on your screen, let your teacher know.

Clean your tablet with the special cloth after you’ve used it.
CHALLENGES AND REMEDIAL MEASURES
## CHALLENGES AND REMEDIAL MEASURES

<table>
<thead>
<tr>
<th>Item</th>
<th>Challenge</th>
<th>Remedial Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of standardisation</td>
<td>• Multiple implementers / implementations of training, methods, suppliers,</td>
<td>• ICT Strategy, in development, will require alignment and homogenisation and collaboration</td>
</tr>
<tr>
<td></td>
<td>• Both nationally, locally / provincially</td>
<td></td>
</tr>
<tr>
<td>Inconsistent monitoring and reporting</td>
<td>• Monitoring of curriculum completion is done on paper</td>
<td>• Monitoring must be aligned to national ICT initiative and items measured must align</td>
</tr>
<tr>
<td></td>
<td>• Monitoring of teacher ICT training is quarterly and sometimes figures disagree</td>
<td>• Reporting must be digitised</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• However this is only meaningful once courses are standardised</td>
</tr>
<tr>
<td>Teachers confidence</td>
<td>• Teachers sometimes avoid ICT solutions and integrating ICT in teaching and learning</td>
<td>• Advocacy roadshows</td>
</tr>
<tr>
<td>Poor connectivity</td>
<td>• MOOCs can’t be accessed in all locations meaning that training has to be delivered in person</td>
<td>• Connectivity plan is being devised</td>
</tr>
</tbody>
</table>
# CHALLENGES AND REMEDIAL MEASURES

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</thead>
</table>
| Consistent sector-wide ICT teacher pedagogy courses, SACE and SAQA accredited | • Costs involved in developing course content and assessment instruments  
• Costs involved in surveying existing courses in detail and amalgamating  
• Costs involved in re-training lecturers | • Engage with HEIs, DHET, SACE, SAQA  
• Identify desired course content  
• Develop working group to develop course content with HEIs and DBE  
• Identify funding source |
| Teachers training                                                    | • Cost of training or re-training (pre-service and in-service)             | • PEDs have funding for this purpose                                              |
| Learners do not know how to use the web accurately                   | Learners do not know how to determine if content is accurate or “fake news” | • Show learners how to identify bad content  
• Train teachers how to identify bad content and show learners how to       |
| Learners/Pupils/Students get distracted and so teachers dislike ICTs  | • Teachers reject devices in class because they disrupt lessons and are a distraction.  
• Learners are distracted by entertaining features/sites.                   | • Advocate for device use by showing the power of ICTs in learning  
• Develop rules and good practices manuals or Acceptable Use Policy          |
RECOMMENDATION

That the Global Dialogue on ICT and Education Innovation *discuss* the Operation Phakisa ICT in Basic Education initiative on Teacher ICT Capacitation.
Thank you!

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