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Digital skills training for teachers – supporting Operation Phakisa: ICT in Education

About Operation Phakisa: ICT in Education and the Eastern Cape e-Skills CoLab's social media workshops for teachers and TVET lecturers. [Read more on p1](#)



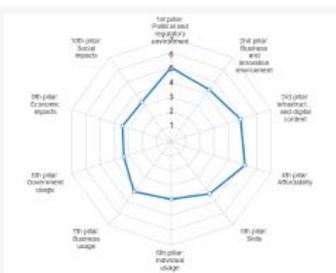
Western Cape seminar on how SA business applies data analytics

Find out about the WC e-Skills CoLab seminar, as well as recommendations and comments from the panel. [Read more on p5](#)



e-Skills policy research presentation at Zanzibar conference

The paper 'A global south ICT policy/regulatory research agenda' was presented. [Read more on p10](#)



SA moves up 10 places in the global Network Readiness Index

Find out more about the report and South Africa's ranking. [Read more on p12](#)





e-skills training

The National Development Plan (NDP) is the country's socio-economic development blueprint. Its aim is to create a better life for all citizens in an inclusive society. It's a framework that guides sector plans and policies, programmes, projects and operations to move South Africa forward.

In terms of NDP implementation, all sectors of society – from government and organised business to labour and citizens – need to work together. This collaboration will accelerate economic growth and address unemployment, poverty and inequality. But large-scale plans and visions need implementation and this is where Operation Phakisa comes in.



Operation Phakisa to fast track the NDP

Operation Phakisa is a fast-results delivery programme. It involves setting clear plans and targets, ongoing monitoring of progress and making results public. It was put in place to fast track the NDP.

Launched in July 2014, this cross-sector programme involves stakeholders collaborating to implement initiatives and concrete actions. The focus is on addressing delivery constraints in a prioritised area. It's about translating detailed plans into concrete results through dedicated delivery and collaboration. ('Phakisa' means 'hurry up' in Sesotho.)

Operation Phakisa: ICT in Education

On 2 October 2015, President Jacob Zuma launched

Operation Phakisa: ICT in Education. The aim is to transform learning and teaching through ICTs, develop ICT-competent teachers and produce ICT-capable learners. ICT in schools is seen as an enabler to improve the quality of education and results.

President Zuma defined ICT-capable learners as those that can access educational resources, be ethical, discerning and responsible users of information, and have the ICT capacity to make meaningful contributions to society. There was also a focus on special needs learners being able to access specialised resources and networks of specialist support.

ICT in Education is there to enable teachers to access the

Digital skills training for teachers – supporting Operation Phakisa: ICT in Education

resources for creating effective learning opportunities. It includes teacher development using online programmes (among other training), as well as collaboration opportunities through online access to communities of practice.

The above speaks directly to developing digital skills (e-skills). An e-skill is the ability to use ICTs confidently and creatively – to help develop the skills and knowledge needed to achieve personal goals and to be full participants in the global community.

The partners

To align the national ICT for Education rollout, the following partners are involved:

- The Department of Basic Education (DBE)
- The Department of Telecommunications and Postal Services (DTPS)
- The Department of Communications (DoC)
- The Department of Higher Education and Training (DHET)
- Other government entities and regulatory bodies in the ICT sector
- There is also a call for industry partners

The aim is to have a coordinated and integrated approach that aligns to the SA Connect rollout (broadband rollout).

The 5 pillars

The systematic rollout of the curriculum plan for ICT has 5 pillars, informed by the 5 streams in White Paper No 7 (2004 White Paper on e-Education). These pillars are:

- Connectivity
- Teacher development
- Digital content
- e-Administration
- Infrastructure and support

ICT infrastructure is not positioned as the solution but as an enabler to the solution.



What is ICT? ICT stands for information and communication technology.

What is an e-skill (digital skills)? An e-skill is more than knowing the basics of how to use a computer (computer literacy). While it's essential to be computer literate, the important question is: what can you do with that? **An e-skill means being able to use technology to add benefit to your life – to actively take part in the world and move ahead.**

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Article continued: Digital skills training for teachers – supporting Operation Phakisa: ICT in Education



L to R: Dr Siswana (Dean FSET WSU BCC), Ms P Nofumba (Subject Education Specialist) and Mr S Ngeni (Deputy Chief Education Specialist) at the social media workshop.

Teacher training is crucial

Professional teacher development is seen as a critical success factor. This is about preparing teachers to embrace technology and to integrate ICT into their teaching practices.

It has been acknowledged that generally teachers have low levels of ICT knowledge and competence. Research reported to a Parliamentary Monitory Group meeting in March this year showed that nationally only 26% of teachers had basic skills in ICT, while only 7% were at an intermediate level .

Developing digital skills training for teachers

Teacher training looks at advancing the abilities, skills and capacity of teachers to deliver quality teaching to learners using ICT. It includes developing guidelines, norms and standards. Blended learning is the long-term goal with initial

steps focusing on developing a tech-enabled environment. The rollout plan is slanted towards bridging the digital divide between urban and rural schools.

Emerging technology

Broadband and wi-fi connectivity, tablets and smartphones provide a wide variety of opportunities and innovative products. The education sector can use these to reach out and engage with learners, such as sharing lectures or lessons, facilitating discussions, providing off-campus teaching, learning and support, building learning communities, and reaching out to alumni.

It is widely acknowledged that learner engagement is a critical component in the learning process. It contributes to the development of higher order thinking skills and is crucial for learner success. The use of collaborative and interactive activities also helps learners to develop confidence and acquire the language or discourse associated with the subject matter. This is vital in an environment in which the language of learning and teaching (LOLT) is predominantly English – a second (or even foreign) language for the majority of learners.

Eastern Cape CoLab activities in the education sector

The EC e-Skills CoLab is working with the Department of Basic Education in the province in support of Operation Phakisa: ICT in Education and to help prepare schools to make maximum use of the coming broadband connectivity. (Schools and clinics are the priority targets for the initial roll-outs.)

The 2015 matric results in the Eastern Cape were the lowest in the country. By actively supporting the development of digital skills competencies and digital awareness of the educators, the e-Skills CoLab is helping to bridge the digital divide and provide opportunities to turnaround the results.

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Teachers, e-learning coordinators and principals at the social media workshop.



Article continued: Digital skills training for teachers – supporting Operation Phakisa: ICT in Education

Using ICT in the classroom – social media workshops for teachers in the Eastern Cape

The EC e-Skills CoLab has embarked on a number of programmes with the Eastern Cape provincial Department of Basic Education to assist with the professional development of teachers in the ICT arena. One of these is the rolling out of social media workshops.

Delegates: Two workshops were held at Walter Sisulu University in East London on 28 and 29 June 2016 for designated district e-learning coordinators, 'ICT champions' and district officials. The education department is adopting a 'train the trainer' model to cascade the training within its schools.

Content: A core theme of the workshops was to show that the use of technology alone will not change the teaching and learning experience:

- To transform the classroom and learners' results, teachers need to transform the way they teach.
- Social media provides valuable tools to do so.

Delegates were shown how to use a number of social media tools to stimulate group activities and discussion, and to capacitate collaborative work (for example for group assignments).

Teachers were also helped to make the most use of the wide variety of resources available on numerous education websites.

A community of practice to support and encourage teachers has been set up. Teachers have shared how they are now passing on their skills to other teachers at their schools.

Feedback: "By the end of the workshops, the educators and district department officials were bursting with creative ideas on embracing this technology in the classroom," says Ms

Teachers, e-learning coordinators and principals at the social media workshop.



Lorna van der Merwe, Acting Coordinator of the EC e-Skills CoLab.

The post-workshop evaluation showed that delegates found the training extremely helpful and unexpectedly rewarding and stimulating.

Further digital training for teacher development:

The CoLab and department are currently planning the

 to next page

Participants' responses

- It enhances teaching and learning!
- Learners will be able to communicate with their teachers when they are stuck with their homework.
- ... because learners get the opportunity to see... what they have learnt in class. It would help them get more time to work and discuss...
- Children of today are advanced, so they need to be exposed to technology.
- Teachers and learners can share resources and have discussions remotely.
- My kids are very much interested in technology, so they would definitely find all of this intriguing.
- Keep learners curious and enjoy my subject more.
- Learners enjoy everything that is technology related.
- The teacher will be able to consult colleagues when in need of assistance. Learners will have access to a different perspective and visual stimulation. More work can be revised in a short period and feedback can be received immediately.
- Videos give learners a chance to understand the subject in different ways.
- Popular media (films, music, YouTube) are a familiar medium that engages students, aids student retention of knowledge, motivates interest in the subject matter, and illustrates the relevance of many concepts especially to our rural communities. Students can see the theories and concepts in action.
- Students can hone their analytical skills by analysing media using the theories and concepts they are studying.
- Students can experience worlds beyond their own, especially if the media is sharply different from their local environment.
- I had no idea how useful these tools might be to enhance the teaching and learning experience. I am deeply grateful for this eye-opening opportunity you have provided for us.

Article continued: Digital skills training for teachers – supporting Operation Phakisa: ICT in Education

collaborative roll-out of other programmes, such as basic e-literacy training for teachers.

Social media workshops for TVET lecturers

On 23 June, a pilot social media workshop was held for King Hintsa TVET lecturers at their Idutywa college campus.

Content: The workshop content and format was the same as that used in the workshops for teachers.

Delegates: The participants were drawn from multiple campuses. They were primarily lecturers from the NC(V) IT and Computer Science and Life Skills programmes.

Feedback: Many expressed surprise at how effectively social media products can be used to enhance teaching and learning. This is social media that learners and lecturers are familiar with.



TVET lecturers at the Social Media workshop.

Further developments: Building on this experience the CoLab is planning engagement with King Hintsa and other TVETs for similar digital skills training. 😊

The provincial e-skills CoLabs

The provincial e-skills CoLabs are based at universities. Each has a focus on a specific area in e-skills:

- **Western Cape e-Skills CoLab:** e-Inclusion and Social Innovation, based at the University of the Western Cape
- **KwaZulu-Natal e-Skills CoLab:** e-Enablement for Effective Service Delivery, based at Durban University of Technology
- **Eastern Cape e-Skills CoLab:** ICT for Rural Development, based at Walter Sisulu University
- **Gauteng e-Skills CoLab:** Creative New Media Industries, based at the National Electronic Media Institute of South Africa (NEMISA)
- **Limpopo e-Skills CoLab:** Connected Health, based at the University of Limpopo
- **Northern Cape/Southern Gauteng e-Skills CoLab:** e-Literacy and e-Business (knowledge economy and e-social astuteness), based at the Vaal University of Technology
- **North West e-Skills CoLab:** e-Agro-tourism, based at the North-West University



Contact NEMISA

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e-skills research and training

Partnering with the Faculty of Economic and Management Sciences, University of the Western Cape (UWC), the Western Cape e-Skills CoLab hosted an e-skills seminar on 19 August 2016. This is part of the ongoing Thought Leadership Series on the Digital Economy.

The topic was 'Beyond the hype of Big Data: how South African businesses apply data analytics for business purposes'. The seminar was attended by 72 people from business, government, academia and students. The main event was a roundtable discussion.

The 3-hour session was run by Prof Kobus Visser, Dean: Faculty of Economic and Management Sciences, and Dr Leona Craffert, Director of the Western Cape e-Skills CoLab. It was held at UWC.

About the round-table topic

Data analytics (Big Data) is one of the core building blocks in digital transformation strategies within organisations. The round-table discussion of South African companies and academics looked at:

- Views on the future development and application of data analytics in South Africa and globally
- How the participant companies are using data analytics in their respective business contexts

Western Cape seminar on how SA business applies data analytics

- Opportunities and challenges experienced – what is so special about analytics and is South Africa ready for it?
- Approaches, needs and opportunities for developing the required skills

The panel discussion was lead by the following people:

- Prof Renette Bignaut (UWC)
- Marc Wilson (Capitec Bank)
- Andre Cloete (DataProphet, a technology business management and product development consultancy)
- Jacobus Eksteen (Compuscan, a credit bureau)
- Gareth Pritchard, CEO BPeSA (Business Process Enabling South Africa is a business association that promotes and develops the IT-enabled services industry in South Africa, with a focus on contact centres.)
- Corey Springett, NICE (company that operationalises Big Data)

Becky Mosehle (Masana: HR Executive) chaired the session. She was previously the Western Cape Managing Executive for Gijima.

The Thought Leadership Series

This provides a shared platform for the world of inquiry and analysis (academia and research) and the world of work to discuss, learn and research on digital economy matters.



The panel members from L to R: Ms Becky Mosehle (HR Executive: Masana and Session Chair), Mr Corey Springett (NICE), Mr Gareth Pritchard (CEO of BPeSA), Mr Jacobus Eksteen (Compuscan), Mr Andre Cloete (DataProphet), Mr Mark Wilson (Capitec Bank), and Prof Renette Bignaut (UWC).

The recommendations and comments from the panel

- Businesses can't compete on raw data which is available to everyone. Data analytics allows organisations to leverage data, such as building predictive models and profitability modelling. This allows for diversification, as well as protecting the existing income stream, making the business model more sustainable. **Analytics isn't a nice to have anymore – it is needed for sustainable business.**
- **Businesses are discovering they have big data, including a history of data, and they need help finding patterns.** This is also happening in other areas, such as genetics and astronomy. Business people are realising that they need to do more with the raw data within their businesses. It's **important that the executives of**

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Article continued: WC seminar on how SA business applies data analytics

The recommendations and comments from the panel (continued)

an organisation or business buy into the data analytics concept. They need to understand how to use it to support their decision making, confirm what they see in the market and check the progress of new products and services

- Is the South African market ready? A lot of companies are established in the way they do business. It's a **challenge to change their thinking around data science, where decisions are based on data rather than gut feeling.** When the idea of the HIPPO (the highest paid person's opinion) exists as a way of making decisions, it's difficult to change to decision making based on data (information).
- **Data analytics provides a significant and new opportunity to get to know the customer (client) better.** This is a constant challenge, especially as a business grows. Companies need to understand who their clients are, what their behaviours are, and then respond in the best possible way.
- With the increase of internet access and new technologies, such as cloud computing, there are significant opportunities. However, **ideas need to be operational and turned into processes.** It's only an opportunity if you can take the proof of concept and move it into operational space.
- The skills base that is relevant for business is more about understanding business and how to interpret data within the context of the business. It's more than being a statistician. **Companies are looking for people who bring statistics, business and computer science together.** Because the market is too small, there isn't space for people to have just one specialist skill in South Africa. This offers an opportunity – **academic institutions need to consider how to bring these skills in as part of the courses.**
- **To some extent one can say that the statistics and the ability to understand and interpret these should become a fundamental skill taught at school.** The world is made up of data and this requires everyone to have a basic literacy around data and statistics. However, it doesn't mean everyone should become a statistician to do so.
- **Another big challenge is communication skills.** It's not enough to know programming if you can't sell the idea. There also needs to be an understanding of the optimal balance between flexibility, efficiency, cost and scalability. This needs to be communicated to the decision makers. **A new job profile is emerging:** people with the ability to interact with business and communicate the analytics, as well as communicate with the analytics team. It's about coordinating the team and driving them towards an actionable point to be used by business.
- There should be **further collaboration between business and universities around the country** – with academia understanding what business needs and business sharing their needs, such as bringing data analytics to everyone's attention. An alignment solution is internship where students can see what skills are needed in the business world. It's also about introducing them to a real-world setting. Furthermore, it's a chance for companies to assess candidates for future jobs. Companies can also provide bursaries, such as helping students if funds run out half way through studies.
- **In the training of data analysts, it's important that the approach followed by universities isn't too theoretical.** Even in teaching methodology, there needs to be a pragmatic or an applied approach. For example, as a theme in class, or by asking students in exams whether a concept could be actioned. It's a balance between theory and practice.
- **Political buy-in is also important.** The ICT space can be difficult to understand and there should be more discussion and information dissemination. Government institutions need to understand the opportunities to support skills growth in this space. 😊



What is cloud computing?

'Cloud computing' refers to accessing software (programmes), infrastructure (such as virtual servers) and platforms (for developing programmes) over the internet. This is instead of accessing them from a computer hard drive. The cloud is just another name for the internet.



e-skills training

Africa's first interdisciplinary Data Analytics Postgraduate Diploma

Dr Leona Craffert, Director at the Western Cape e-Skills CoLab, is part of the team that designed Africa's first interdisciplinary Postgraduate Diploma in Computer Software and Media Applications (with specialisation in Data Analytics and Business Intelligence).

Collaboration between industry, academia and government

Along with the Economic and Management Sciences Faculty of the University of the Western Cape (UWC), the diploma was designed in collaboration with industry partners: Capitec Bank, Business Process Enabling South Africa, Pivotal Analytics, DataProphet, Nimble Group and Compuscan.

Why is the course needed?

Globally, businesses have access to all kinds of data, including Big Data. There needs to be specialised data analysis to provide insight around the challenges and opportunities. Data analysis is seen as the gateway to new development. However, in Africa, businesses have identified a lack of talent in this area.

The course content and approach are designed to respond to industry needs and bridge the gap between academic training and business application. The programme is aimed at growing local talent to respond to the increasing business need for skills in data analytics.

What does it cover?

An interdisciplinary curriculum of analytical and qualitative studies incorporates the disciplines of business management, information systems, statistics and computer science. This is followed by an internship where candidates must show an ability to solve complex problems. The course combines online learning with intensive face-to-face or classroom blocks on campus. It is being offered at UWC. 😊

Information about the course

Admission requirements include a Bachelor degree with an average of 55% for exit modules in Information Systems, Business Management, Computer Science or Statistics, or a bachelor degree (or equivalent) with 2 years relevant working experience. Students can start from January 2017. The part-time course runs over an 18-month period. For more information, contact ltyhalibongo@myuwc.ac.za or 021 959 2625/ 079 880 4655/ 082 472 6961.

Understanding data analytics

Data analytics allows for faster and better decision making. Big data analytics can identify new opportunities and improve efficiencies by analysing data immediately. It is only within the recent past that organisations have realised that they can productively use the volumes of information they have access to (Big Data) to develop trends and insights.

Data analytics can be broadly described as methods of examining raw data and extracting data in a format that enables meaningful engagement with the purpose of drawing conclusions about that information. (Wladawsky-Berger, I. 2015. *Learning to Apply Data Science to Business Problems*. Online. <http://blog.irvingwb.com/blog/2015/12/some-thoughts-on-the-education-of-data-scientists.html#more>)

Numerous experts have identified the need for creating skills within data analysis. Here is an example of a few:

- The WEF presents scenarios in which organisations will "... experience very high growth centred on data analysts and software and applications developers – not just within the Information and Communication Technology industry but across a wide range of industries, including Financial Services & Investors, Media, Entertainment and Information, Mobility and Professional Services, as computing power and Big Data analytics constitutes a significant driver of employment growth in each." (WEF 2016. *The Future of Jobs: Employment Trends*, <http://reports.weforum.org/future-of-jobs-2016/employment-trends/>)
- The MIT Sloan Management Review of 2013 states that since data analytics is in the infancy stage many organisations are experiencing major challenges in determining how to use data, and where and when to use it. (MIT Sloan Management Review 2013. *From Value to Vision: Reimagining the Possible with Data Analytics*, Cambridge, MA: SAS Institute Inc. p17)
- In a Harvard Business Review article, the authors explain data analysts as "the people who understand how to fish out answers to important business questions from today's tsunami of unstructured information. As companies rush to capitalize on the potential of big data, the largest constraint many face is the scarcity of this special talent." (Davenport T, Patil DJ 2012. *Data Scientist: the Sexiest Job of the 21st Century*, Harvard Business Review, October, p70-76)





e-skills awareness

In the media



- Dr Surendra Thakur, Director of the KZN e-Skills CoLab, was interviewed on **2 radio shows on 29 September 2016**. Both of the topics were on the advantages and disadvantages of SMS voting. This was in relation to Wits University using SMS voting on whether students wanted the academic programme to resume the following week. Click here for the Voice of Wits interview: <https://omny.fm/shows/drive-today-in-sa/t-heliftclub-drive-today-in-sa-9>. Click here for the interview with Cape Talk: www.capetalk.co.za/articles/113134/witspoll-6-reasons-why-the-sms-voting-wasn-t-a-good-idea

- Dr Surendra Thakur also wrote an opinion piece on SMS voting and the Wits poll for **Independent Online**. See www.iol.co.za/news/witspoll---was-sms-voting-the-right-choice-2074276. The IOL feed was covered by 54 websites within 3 hours.

Some points around SMS voting

SMS voting is a form of electronic voting (e-voting) but it's uncontrolled. The advantages include the sense of immediacy and that it can be done anywhere and anytime.

However, because of queuing (latency), the results can be delayed. Another issue is that of anonymity and that the votes can't be verified ie checking they come from the actual person. (These are just some of the issues.)

In general, SMS voting has proven to have failed. Better remote voting systems do exist but these have not been bought or built in South Africa.



e-skills training

Social media for SMME development

Small, Medium and Micro Enterprises (SMMEs) are viewed as having the potential to drive economic growth, innovation and job creation. The national importance of SMMEs is such that a new Ministry of Small Business Development was established in early 2014.

In his 2015 AHI Conference address, Mr Francois Groepe, Deputy Governor of the South African Reserve Bank, noted that in terms of GDP contribution, an estimate of 52-57% "... has been quoted by the Deputy Minister of Trade and Industry, Elizabeth Thabethe, who put the number of SMMEs in South Africa at 2,8 million and their contribution to employment at 60%".

He also noted that "the National Development Plan projects that, by 2030, no less than 90% of new jobs will be created in small and expanding firms".

It is clear that SMMEs play an important role in South Africa's economy and the country's development. NEMISA and its CoLabs recognise the importance of e-skilling SMMEs and increasing SMME

Participants' response

- There are simple yet efficient uses of social media and advertising with low cost and very beneficial ways to broadcast or market for myself or other companies.
- ... now I can use media to my advantage
- I could use it for my ceramic products, for promoting and marketing my business at a new level.
- Over the past few years I have tried and viewed a lot in the line of social media and also websites. For me this class has answered many unsolved areas.
- I have always wanted to know about how to save information online.
- This is exactly what I've been looking for.

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Article continued: Social media for SMME development

efficiency by leveraging ICT e-skills for SMME development.

SMME social media workshop

The EC e-Skills CoLab delivered another rollout in its series of social media workshops for SMMEs. These began in 2014. The workshop was conducted on 24 June 2016 in East London.

Delegates: The delegates were mainly from incubating SMMEs.

Content: The focus was on how to make social media work for SMMEs through producing content to promote and enhance their business. Delegates were also shown how to use analytics and other tools to monitor the effects.



Delegates at the SMME social media workshop.

Response: There was a very positive response to the workshop. 😊

Social media and business

The 'South African Social Media Landscape 2016' released in April 2016 shows that Facebook is the most dominant social media platform. Instagram had the largest growth – 133% – and now has 2.68 million users. The study was conducted by World Wide Worx and Fuseware. (<http://www.worldwideworx.com/wp-content/uploads/2016/02/SA-Social-Media-Landscape-2016-Executive-summary.pdf>) The study is based on access to consumer data from 7 major social networks and **a corporate survey conducted among more than a hundred of South Africa's leading brands.**

Following is some of the data from the study:

- Facebook has grown by 8%, from 12 million to 13 million – used by a quarter of all South Africans and 10 million, or 77%, use it on mobile devices.
- Twitter has grown by 12%, from 6,6 million to 7,4 million users.
- Video sharing platform YouTube increased its user base, with a 15% from 7,2 million to 8,28 million users.
- **The biggest growth has come from Instagram, which rose a massive 133%, from 1,1 million to 2,68 million – 42% of major brands use it.**
- Smartphones are used by 7,9 million South Africans to access Facebook, while 1,6 million are using basic feature phones to do so. Tablets are being used to access Facebook by 1,4 million people – many of whom are also using their phones.
- For the second consecutive year, social media apps have dominated free downloads on all three major app stores in South Africa (Google Play for Android, the Apple App Store for iOS, and the Windows Store). This reveals just how deeply entrenched mobile social apps have become in South Africa.



NEMISA alumni

NEMISA alumni news

- Tribeca Public Relations has appointed Tshego Thulo as an account executive. Tshego has a background in public relations, social media content development and radio production. **She is a 2013 radio graduate from NEMISA.** Her dynamic career has seen her acquire a wide range of skills that include managing internal communication content for a range of consumer and food brands, social media for one of South Africa's largest domestic airlines, and being a news anchor for Mix FM.
- **Two students from the Eastern Cape Learnership 2016 are furthering their studies.** Vuyokazi Funani has been accepted into the MET School of Film. Nobhule Kupiso has been accepted into AFDA Port Elizabeth. They are currently both applying for funding. The Eastern Cape Learnership 2016 in Film and Television Production Operations was a partnership between NEMISA and the Eastern Cape Information Technology Initiative (ECITI). 😊



e-skills research

e-Skills policy research presentation at Zanzibar conference

Dr Leona Craffert, Director of the WC e-Skills CoLab, and Carlynn Pokpas (PhD student and research intern in the CoLab), attended the CPRsouth2016 conference in Zanzibar. They were part of the group of authors for a paper presented at the event. The theme was 'ICT policy and regulation for Inclusive Innovation'.

The conference was co-hosted by the Tanzania Commission for Science and Technology (COSTECH) and the Tanzania Communications Regulatory Authority (TCRA). It was funded by the International Development Research Centre (IDRC). The event was preceded by the Young Scholars Tutorial Programme.

Conference topics included:

- Inclusive innovation
- Connecting cities, citizens, countries
- Issues around women's inclusion
- Issues around digital literacy
- Data revolution: enabling uses and limiting abuses
- A global south ICT policy/regulatory research agenda

A global south ICT policy/regulatory research agenda

The paper, 'A global south ICT policy/regulatory research agenda', was presented by Prof Leo Van Audenhove from SMIT (Studies Media Information Telecommunication) – Vrije Universiteit Brussel. Other authors included:

- Catalina Iordache and Ilse Mariën from SMIT – Vrije Universiteit Brussel
- Prof Walter Claassen and Dr Leona Craffert, CoLab for e-Inclusion and Social Innovation – University of the Western Cape and NEMISA

These are members of the International Joint Research Group (IJRG). The group is building capacity in applying living lab research methodology for digital inclusion and social innovation projects. This is to address community challenges in South Africa.



What are Living Labs? A Living Lab is an environment where research and innovation are applied to developing new products, services and processes. This is done with real users in a real-life environment. People are part of the entire development process as users and co-creators. The process recognises users' needs and the working conditions of service providers. The Living Lab environment is seen as an innovation system.

What is social innovation? Social innovation is about new ideas (such as products and services) that meet social needs ie they are for the good of society.

From the presentation 'A global south ICT policy/regulatory research agenda'

More and more people – at all levels of society – use media, the internet and social media as part of their day-to-day lives. They are trying to benefit from them in a meaningful way for life, family, community, work and learning.

These people need the skills to critically understand and engage with content and applications. They need the skills to operate, produce and meaningfully use technology.

An important challenge remains: how to reform and co-ordinate policy between and over different layers of government in order to integrate 'e-skilling' into all areas of government policy.

The underlying research focuses on these policies at the level of the European Commission and in South Africa.

At the level of the European Commission, there seems to be a broad understanding that the advent of the digital age requires new skills and competencies to handle the rapid changes, the new possibilities and new challenges.

This does not necessarily seem to result in a single unified policy. Different Directorate-Generals use different interpretations, different concepts and different approaches. This is not necessarily a problem: 'All these perspectives complement each other. Furthermore, all of them highlight

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About CPRsouth

CPRsouth refers to Communication Policy Research: south. It aims to build human capacity in the south by reinforcing and developing the knowledge, skills, and commitment of ICT policy and regulation scholars in the region or with substantial interest in the region.

The overall objective of CPRsouth is to nurture policy intellectuals capable of informed and effective intervention in ICT policy and regulatory processes in specific country contexts.

Article continued: e-Skills policy research presentation at Tanzanian conference

that the main issue today is no longer access to and use of technologies, but the capability to benefit from them in meaningful ways for life, work and learning’.

At the level of South Africa, the picture is different. e-Skills have been identified as important in the so-called information society since the International Advisory Commission in 2007. With the National e-Skills Plan of Action (NeSPA) 2010 and 2012 and the National e-Skills Curriculum and Competence Framework (NCCP), there has been a move towards a national framework on e-skills.

At this point, however, it should be noted that a more comprehensive, clear and validated model might be needed. However, **the urgency of facilitating the development of e-skills competency of people across sectors for work and life, does not – as yet – seem to be high on the agenda of all government departments.**

Summary of findings and recommendations

- Media Literacy and e-skills policy have been developing differently in the EU and South Africa. In the

EU, the focus is more widely placed on media literacy skills, comprising critical interpretation skills related to content. In South Africa, the focus is more squarely on e-skills comprising skills which are more operational in nature.

- Media literacy skills and e-skills need to be integrated into a more comprehensive model for media literacy skills. This, however, requires more integrated policy approaches both in the EU and South Africa.
- Being part of the 21st century knowledge society requires people to have the necessary skills to critically understand and engage with content and applications and to be able to operate, produce and use technology meaningfully.
- The specific challenge for South Africa is to combine a strong access policy with media literacy and e-skills policies. Whereas in many EU countries access is more or less secured, it is certainly not the case for South Africa. The risk is that e-skills policies, and especially media literacy policies, are treated as a luxury asset. Our view is that it is not. Both should be developed in conjunction. 😊



Prof Leo Van Audenhove presenting at the conference.



From L to R: Prof Cheryl Ann Hodgkinson-Williams (UCT), Prof Leo van Audenhove (VUB), Dr Jean-Paul Simon (France), and Carlynn Pokpas (UWC).

ICT Achievers Awards 2016

The ICT Achievers Awards 2016 recognises and celebrates those involved in South African ICT, contributing to national economic growth and development. Nominees can be individuals or businesses. It is hosted by the South African Communications Forum (SACF) and includes partners such as: Times Media Group, Vodacom and MTN. The categories include: Top ICT SMME; Top ICT Innovator; Top ICT Youth Leader (under 35); Top Woman In ICT; ICT Accessibility Excellence; Local ICT Industrialisation, and Honorary ICT Lifetime Achievement. The awards ceremony will take place on 27 October 2016 in Gauteng. For more information, contact the SACF on (010) 330 0730 or email info@ictachieversawards.org.za.

Like, share and comment

Facebook: <https://www.facebook.com/SACF-ICT-Achievers-Awards-2016-1774672976147349/>

Twitter: https://twitter.com/ict_achievers





South Africa has moved up 10 places in the 2016 Global Information Technology Report's 'Networked Readiness Index' (NRI) from the World Economic Forum. It is now in 65th position worldwide.

The report assesses countries' preparedness to benefit from emerging technologies and to capitalise on opportunities presented by the digital revolution. It is also noted that networked readiness is "highly correlated with per capita income".

Explaining SA's move upwards

South Africa's digital transformation is mostly business driven. It performed best in business use (32nd), then individual use (77th) and then government use (105th).

The report notes: "Despite an overall mixed performance, South Africa makes large strides in the overall NRI rankings to 65th, almost entirely driven by improvements in infrastructure and affordability." The investments "have significantly increased international Internet bandwidth and put the country among the top 20 globally on this particular indicator".

Concerns around the innovation and business environment

South African business executives perceive a relatively good performance around the regulatory and political environment. However, the "innovation and business environment is rated significantly worse". These are also showing strong signs of deterioration, "especially regarding technology and venture capital availability, government procurement of the latest technologies, and delays as well as procedures to start a business".

Improvements around affordability

Improvements include mobile tariffs that have more than halved and the slight drop of broadband tariffs. This reduces barriers to adoption in terms of affordability. The report notes that "for impact to start materializing, significantly more buy-in from government will be needed across all areas of vision, promotion, and efficient use".

Sub-Saharan Africa

Other Sub-Saharan countries are among the top upward movers. Like South Africa, Ethiopia moved up 10 places (120th) and Côte d'Ivoire moved up 9 places (106th).

More about South Africa's ranking

- In Environment, South Africa ranked 65 (out of 139). The political and regulatory environment is ranked 26. The business and innovation environment is ranked 65.
- In Readiness, South Africa ranked 69. Infrastructure and

About the report

The 2016 edition of The Global Information Technology Report assesses the state of networked readiness of 139 economies using the Networked Readiness Index (NRI). It includes a detailed performance of each economy with rankings for each of the 53 individual NRI indicators.

The networked readiness framework is based on 6 principles:

- A high-quality regulatory and business environment is critical to fully leverage ICTs and generate impact.
- **ICT readiness (measured by ICT affordability, skills, and infrastructure) is a precondition to generating impact.**
- Fully leveraging ICTs requires a society-wide effort: the government, the business sector, and the population each have a critical role to play.
- ICT use should not be an end in itself. The impact that ICTs have on the economy and society is what ultimately matters.
- How the set of drivers (environment, readiness, and use) interact, co-evolve and reinforce each other to form a virtuous cycle. (A 'virtuous circle' refers to complex chains of events that are reinforced through a feedback loop with positive results.)
- The networked readiness framework should provide clear policy guidance.

The NRI has 4 main categories:

- Environment (Political and regulatory environment; Business and innovation environment)
- Readiness (Infrastructure; Affordability; Skills)
- Use (Individual use; Business use; Government use)
- Impact (Economic impacts; Social impacts)

About half of the individual indicators used in the NRI are sourced from international organisations. The main providers are the International Telecommunication Union, UNESCO and other UN agencies, and the World Bank. The other indicators are derived from the World Economic Forum's Executive Opinion Survey (the Survey).

For the full report, see <http://reports.weforum.org/global-information-technology-report-2016/>. For information specific to South Africa, see <http://reports.weforum.org/global-information-technology-report-2016/economies/#economy=ZAF>.

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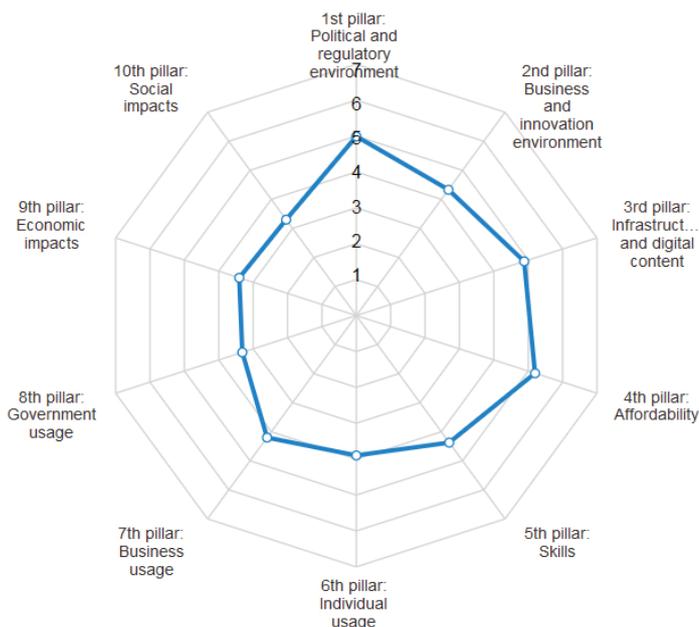
Article continued: SA moves up 10 places in the global Network Readiness Index

digital content is 44, Affordability is 74 **and Skills is 95.**

- In Usage, South Africa is ranked 77. Individual use is 77, Business use is 32 and Government use is 105.
- In Impact, South Africa ranked 93. Economic impacts is 57. Social impacts is 112.

Key findings under the report's 'Innovating in the Digital Economy' theme

- **The digital revolution changes the nature of innovation.** There is a different type of innovation, increasingly based on digital technologies and on the new business models that open up. The data show that business executives are increasingly focused on innovation.



Graphic representation of South Africa's rankings.

- **Firms will face increasing pressure to innovate continuously.** Countries with high economic and digital innovation impact show very high levels of business ICT adoption. This technology-enabled innovation creates new competitive pressures thus calling for more innovation by all companies. However, a stagnating rate of ICT adoption and use by existing companies suggests that a large number of businesses are not getting into the game fast enough.
- **Businesses and governments are missing out on a rapidly growing digital population.** In recent years, digital innovation has been primarily driven by consumer demand. This is largely being met by a relatively small number of companies. Businesses need to act now and adopt digital technologies to capture the growing market. A widening and worrying gap is also emerging between individual ICT use growth and public sector engagement in the digital economy. Governments can do more to invest in innovative digital solutions to drive social impact.
- **A new economy is shaping, requiring urgent innovations in governance and regulation.** The new digital economy will need the right framework conditions for sustainability. A resilient digital economy also calls for new types of leadership, governance and behaviours. A critical success factor will be agile governance frameworks that allow societies to anticipate and shape the impact of emerging technologies and to react quickly to changing circumstances.

The report includes a section exploring the impact of the free flow of data across national borders on innovation and growth. The report notes: **"The flow of digital communication between countries, companies, and citizens has been recognized for years as a critical driver of economic growth and productivity."** 😊

The National Integrated ICT Policy White Paper

The National Integrated ICT Policy White Paper was approved by cabinet on 28 September 2016. You can find it at <http://www.dtps.gov.za/mediaroom/media-statements/647-national-integrated-ict-policy-white-paper.html>.



National Cyber Security Awareness Month



October is Cyber Security Awareness Month 2016. This initiative started in the United States and has become a growing global effort to promote online safety awareness. (Cyber is another way of referring to the internet.)

The focus is on ensuring that all digital citizens have the resources needed to stay safer and more secure online while protecting their personal information. The overall aim is to raise awareness about cyber security. The key messages are:

- Keep a clean machine
- Protect your personal information
- Connect with care
- Be web wise
- Be a good online citizen
- Own your online presence

Basic steps to online safety and security

Staying safer online starts with 'STOP. THINK. CONNECT':

STOP: make sure security measures are in place.

THINK: about the consequences of your actions and behaviours online.

CONNECT: and enjoy the internet.

Practising good cyber security is critical. This includes preventing and responding to identity theft and scams, ensuring that home networks are secure, managing the security of mobile devices, and teaching children to use the internet safely, securely and responsibly.

Creating a culture of cyber security in the workplace

All organisations can experience data breaches or be targets of cybercrime. This results in stolen intellectual property, theft of personal information or – if critical infrastructure is attacked – a disruption to people's way of life. Employee education and awareness is needed, as well as following best practices.

No single entity is solely responsible for securing the internet

Everyone has a role in cyber security. Actions have a collective impact. When we use the internet safely, we make it more secure for everyone.

(Information in this article sourced from <https://staysafeonline.org/ncsam/about/>)

More information

South African information can be found at the Centre for Cyber Security (<http://adam.uj.ac.za/csi/index.html>).

Resources such as tip sheets, infographics and research can be found at <http://staysafeonline.org/ncsam/resources/>. 😊

How to keep your information safe

- Know what information you have – about yourself, your family and your friends and about your work, business and career.
- Know where valuable information is (including which devices it is on). Note that public wi-fi exposes you, as devices can be easily accessed.
- Protect information. Use a password, encrypt the data and lock the device. Passwords and PINs should be as complicated as possible.
- Back data up.
- Know what to do if information is lost or stolen.
- Update to the latest software versions.

(Source: National Science and Technology Forum)