

## Edition 7, 2012



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innovative  
responsive  
developmental  
enabler  
collaborative

The e-Skills Institute is a national catalyst, facilitator and responsive change agent in a rapidly changing information and knowledge-based environment, by leading the creation and implementation thereof, to benefit the total population. The e-Skills Institute focuses on learning, innovation and a monitoring and evaluation framework.

Hosted by The South African government's Department of Communications through its e-Skills Institute

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Invitation to attend the Global ICT Forum on Human Capital Development and the second e-Skills Summit of South Africa. See p1 for details.

globally evolving practices and research, teaching and

## Call for stakeholder's participation at the second e-Skills Summit of South Africa

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The first e-Skills Summit took place in 2010 and the result was the first National e-Skills Plan of Action (NeSPA). Now, two years later, it is time to evaluate the progress made and to develop an updated plan for the next 24 months (NeSPA 2) that will advance South Africa's e-skills capacity.

### Incorporating into the ITU Forum

The e-Skills Summit 2012 forms part of the international Telecommunications Union's (ITU) Global ICT Forum on Human Capital Development. The objectives of the ITU Forum align closely to that of the Department of Communications and its e-Skills Institute (e-SI). There is a combined focus on the need and importance of capacity building in driving the e-skills agenda and identifying strategies that drive capacity building forward for a knowledge-based economy.

To achieve these objectives, there will be common plenary sessions with aligned content and resources. However, there will also be focused tracks and modules.

### Developing an updated plan of action

The intention of the second e-Skills Summit is to:

- Evaluate progress of the 2010 NeSPA document
- Take stock of all the lessons learned during the first two years of NeSPA
- Align current initiatives and identify gaps to impact the South African national strategic developmental goals
- Develop an updated and integrated action plan for the next 24 months (NeSPA 2) which will target e-skills enhancement in South Africa and provide linkages to efforts across the African continent

NeSPA 2 will need to be aligned with the South African government development strategies (National Development Plan – Vision 2030, the Medium Term Strategic Framework) and the World Summit on the Information Society (WSIS) Plan of Action, NEPAD, and the Millennium Development Goals (MDGs).

Objectives include further developing an internationally-

#### Key topics

- Broadcasting trends and the necessity of transitioning to digital broadcasting
- Policy, regulatory and technical challenges of the transition to digital broadcasting
- Human capital development in an m-environment: multi-sector perspectives
- Leveraging learning and development through mobile based devices
- Social development and building ICT literacy
- Country case studies on the transition roadmap
- Country policies and experiences with e-skills initiatives
- Developing leadership for knowledge based economy
- Readiness of higher learning institutions for a digital society.

Hosted by The South African government's Department of Communications through its e-Skills Institute



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### Global ICT Forum on Human Capital Development 22-25 October 2012

For more information on attending the conference, go to <http://academy.itu.int/>. This conference is essential for developing South Africa's National e-Skills Plan of Action 2 (NeSPA 2). Stakeholders are urged to attend.

#### How to register

South African delegates to go to [www.itu.int/net3/ITU-D/meetings/registration/?\\_eventid=4000134](http://www.itu.int/net3/ITU-D/meetings/registration/?_eventid=4000134)

and to use the following to register:

Username: 1102979 Password: Nykolay

International delegates to go to <http://academy.itu.int/> to register.

recognised South African coordinating platform that engages government, education, business and civil society in addressing the lack of e-skills.

#### Details on the event

The event is being held on 22-25 October 2012 at the Southern Sun's Cape Sun in Cape Town. The theme of the Forum is '**Digital inclusion: transition from analogue to digital broadcasting**'. This is the first year an ITU forum is being held in Africa and in South Africa.

#### About the ITU's Global ICT Forum on Human Capacity Development 2012

The Global ICT Forum on Human Capacity Development 2012 looks at the technological policy, and regulatory imperatives of the digital era in light of the significance of the global deadlines for migrating to digital broadcasting.

The objective is to discuss the capacity building challenges of transitioning to digital broadcasting and to address how these challenges can be met. It will also highlight the huge opportunities of a digital economy and how this can be a source of empowerment for people.

Within the sphere of capacity building, it will explore the learning opportunities available through mobile-based platforms and devices, and how these can transform the way we access information and learning and can narrow the existing information gap.

The Forum will be an opportunity for countries and organisations to showcase initiatives undertaken in this regard, such as the e-skills initiative in South Africa.

## Contributing to making South Africa e-literate by 2030

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Historically universities have worked within silos, protecting their intellectual property and skills network. While a silo-driven focus is based on a desire to succeed within academia, it doesn't necessarily enhance the collective nature of academic work especially when working towards national objectives.

The e-Skills Institute (e-SI) has created a multi-stakeholder collaborative network that is targeted at reducing duplication and ensuring an increased impact through aligned efforts. With universities instrumental within the multi-stakeholder network, the silo effect is being broken down. A recent Northern Cape/Southern Gauteng e-Skills Knowledge Production and Coordination Hub workshop on e-skills is a case in point.

### Focusing on an e-literacy curriculum

The Northern Cape/Southern Gauteng Hub, based at the Vaal University of Technology Science and Technology Park, held an e-skills colloquium on 3 September 2012. The intention was to share the hub's curriculum framework which focuses on e-literacy. Other topics covered included the hub's approach to mobile technology, the research agenda and the innovation agenda.

The national curriculum framework has been well defined for roll out. The hub's e-literacy framework builds on this, integrating foci, themes, critical cross-field outcomes (such as e-health and the e-enablement of government services) and the soft skills needed for leadership in e-skills.

The focus remains on leadership development in small business, NGOs and government. Empowering this layer of society will allow for scalability where leaders can then train others. The Northern Cape/Southern Gauteng hub's core area is that of e-literacy, particularly for those most marginalised within South African society.

### Research on poverty and social exclusion

The focus of the Northern Cape/Southern Gauteng hub's research is on e-skilling impoverished communities premised on the problem of poverty and social exclusion. The purpose is to improve livelihoods through employability,

innovation and entrepreneurship, as well as to create a mind shift around the use of technology.

Information on the hub's research nexus showed the foci and approach, with research emerging from the hub's activities and strengthening the hub in context. Current focus areas include deepening the environmental scan and researching the curriculum in context with active learning and action research. The research will also involve investigating the impact on targeted communities.

### Added benefits

Discussions were also held on the activities within the Vaal University of Technology Science and Technology Park and how incorporating the hub will allow hub participants to be exposed to innovation activities. This exposure will support what is being learnt in training and how it can be translated within the participants' own context.

### From collaboration to team learning

There were 27 delegates including representatives from the other e-SI hubs and e-SI central office, as well as stakeholders from Sedibeng Teachers Council, the Community Forum and the University of Johannesburg. The collaboration allowed for input and the highlighting of key areas that need to be addressed. Examples of these areas include accommodating the illiterate and unpacking the impact of communicating in English. The event allowed for a collective sharing and reflection, moving into team learning.

### Monthly research colloquium

A colloquium with postgraduate students will be held on 20 September 2012. This is being run by the Northern Cape/Southern Gauteng e-skills hub. Using a peer supervision approach, the intention is to support Masters and Doctoral students within the e-skills research focus areas and to develop a community of practice on e-skills research. This will be a monthly event.

## e-SKPCH events

### KZN e-SKPCH events

#### September 2012

- Monthly Stakeholders Forum on the fourth Wednesday

#### October 2012

- Monthly Stakeholders Forum on the fourth Wednesday

#### November 2012

- Monthly Stakeholders Forum on the fourth Wednesday

### Gauteng e-SKPCH events

#### October 2012

- Gauteng e-SKPCH stakeholder meetings

#### April - December 2012

- Regular presentation of e-skills courses for entrepreneurs and in the creative industries

#### July - December 2012

- Incorporate Blackberry mobile apps development as part of a BCom (Honours) Informatics course and in Usability Testing

### Western Cape e-SKPCH events

#### October - November 2012

- 8-12 Oct: e-Skills workshop – cohort 3 – face-to-face
- 15 Oct-9 November: cohort 3 – online phase

Contact details for the e-Skills Institute

- Mymoena Sharif,  
[mymoena@doc.gov.za](mailto:mymoena@doc.gov.za)

## Towards motivating learners to close the e-skills gap

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What influences an individual to follow a career within ICT? Is there a way to provide influencer mechanisms to encourage youth to take this path? Will early training in applications development promote an uptake?

These are the type of questions being addressed in a PhD research thesis located at the Gauteng e-Skills Knowledge Production and Coordination Hub, University of Pretoria. This type of research will go some way to addressing the lack of ICT skills within South Africa.

As part of the research, a Blackberry training course is being held for high school learners. Started on 17 August 2012, this eight-week course will end on 19 October 2012 and involves 46 grade 10 and 11 learners. This is one of the first courses to be run. In total, the training will reach 80 of the top learners from surrounding high schools in Pretoria.

### Transition courses to promote ICT interest

As part of the research, learners were given a questionnaire investigating their interest in ICT and what they define as a primary motivator and influencer when making career decisions.

Initial reflections on the course and research show that the Grade 10s are finding the training a challenge as they don't have the necessary Java and Delphi skills. The Grade 11s are doing well as they have already been exposed to ICT at school for a year.

A transition course that promotes the study of ICT may need to be broken down further to accommodate the capability differences and to ensure that the course isn't too challenging and thus discourages learners. To remedy the current situation, the Grade 10 learners on the course are undergoing a Java boot camp on 15 and 16 September 2012.



*Blackberry training course for high school learners to encourage an interest in ICT careers*

## Web 2.0 – learning how to use the Web effectively

The KwaZulu-Natal e-Skills Knowledge Production and Coordination Hub, based at the Durban University of Technology, is offering a course on using social media on the internet. This is particularly useful for government and civic organisations to leverage the power of the web and to engage in an interactive way.

Simple, open source internet-based applications and services that promote online collaboration are available at little or no cost. These new online technologies are known as Web 2.0 (social media), and enable people to collaborate and to create, share and publish information.

This intervention will assist students and academics to innovate or develop artifacts that allow government and

citizens to produce more e-services. The course provides people with the infrastructure and creative knowledge to produce these artifacts (applications, programmes etc).

### Course details

Two courses will be run in November 2012 and three in January/February of 2013. Each course will have 25 delegates and will run for one week. The course is free, with students paying for accommodation. Lunch will be provided by the venue. The first course runs from 12-16 November 2012 and is held at the University of KwaZulu-Natal, Pietermaritzburg. The second course is from 2-5 December at the Durban University of Technology.

### Further engagements with FET colleges

The Web 2.0 course will also be offered at the Elangeni FET College as part of the KwaZulu-Natal e-skills knowledge production and coordination hub's development of courses for the e-enablement of government services.

### Want to attend?

All interested parties within government and civic organisations in South Africa, please contact hub coordinator Colin Thakur at [Thakur@dut.ac.za](mailto:Thakur@dut.ac.za) or register online at [www.web2fordev.net/](http://www.web2fordev.net/). Deadline for application is 10 October 2012.

## Assisting Ugu District Municipality with the e-enablement of government services

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The process of engaging local municipalities is essential when developing the e-skills agenda – particularly with reference to the e-Skills Institute's (e-SI) target area of improving on the delivery of government services.

The KwaZulu-Natal e-Skills Knowledge Production and Coordination Hub, based at the Durban University of Technology, engaged with the Ugu District Municipality in Port Shepstone on 22 August 2012. Information on the e-SI and the KZN e-Skills Hub was presented to senior management within the Office of the Mayor, as well as progress and future plans for the hub's focus area around the e-enablement of government services.

There is now an agreement to run an e-enablement certificate pilot course at second test phase with collaboration on training. The course will be presented to middle and senior management in the Ugu Municipality. Content will cover two focus areas: the use of ICTs to positively impact on people's lives (such as using SMS services during disasters) and the leveraging of ICT for the e-enablement of government services.



## Towards creating smart communities

A smart community is a community in which members of local government, business, education, healthcare institutions and the general public work together – using ICTs – to improve the community.

The primary aim of a smart community is to improve the lives of its members and enable them to be more self-sufficient. Smart communities ideally also provide ICT infrastructures such as computers which can be used for a range of options such as learning, training and communications. However, the ICT infrastructures are primarily a mechanism to learn to use ICT and to make life easier.

In developing a smart community and using ICT as an important driver, it is necessary to understand the context and needs of the community.



### Gauteng Hub connects with Lesedi la Batho

The Gauteng e-Skills Knowledge Production and Coordination Hub, based at the University of Pretoria, has identified Lesedi la Batho as a smart community partner. Lesedi la Batho is a non-government organisation (NGO) that collaborates with partners to increase the impact on Mabopane, a township north-west from Pretoria.

Lesedi la Batho's involvement with Mabopane has created a potential platform for developing the area into a smart community. There is an ICT lab, access to the local high schools, and the Sizane Skills Training Programme. The latter empowers young women and their children to become financially independent and self-sufficient members of the community. The skills programme includes training in sewing, beading, baby care, child health and computer literacy.

This smart community initiative forms part of the e-Skills institute activities for increasing employment in South Africa, strengthening business development and improving socio-economic development.

## Gaining an understanding of mobile applications development in South Africa

The e-Skills Institute (e-SI) is working to gain a better understanding of the current mobile applications development landscape in South Africa. This is being done through its Gauteng Knowledge Production and Coordination Hub which focuses on the national thematic area of creative industries. Multi-stakeholder collaborators include Cisco, RIM, Apple (Core Group), UNDP/UNCTAD, Kenya, Rwanda and the Queensland University of Technology (Australia).

The e-SI is calling for organisations and individuals to participate in an online survey to assist with the research. Whether you are a user, developer or trainer, please go to [www.get-apped.co.za](http://www.get-apped.co.za) and complete the survey. It will take 15 minutes of your time.



## Engaging with students to create a mobile apps development community

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As a precursor to establishing the Western Cape e-Skills Knowledge Production and Coordination Hub's innovation application factory, the Information Systems Department of the University of the Western Cape and the Western Cape e-Skills Hub hosted a Code Jam in May 2012. This was done in collaboration with Gijima

applications in the hub's innovation application factory. The intention is that development will focus on apps for business and for social innovation, in line with the Western Cape e-Skills Hub focus areas of digital inclusion and social innovation.



Students at the entrepreneurship course

to facilitate application skills development and to promote the idea of using the app development skills to stimulate entrepreneurship with the view to creating a livelihood.

### Code Jam

The competition involved students submitting ideas for apps development. Participating students received training in the necessary development skills from Immedia and then developed their apps. Starting with over 400 ideas, the entries were then scaled down to 15 ideas that competed in the final round. A panel that included representatives from Gijima, Immedia, Apple and the University of the Western Cape selected the five winning applications. The developers received iMacs and Apple devices as prizes.

The 2012 Code Jam concluded on 24 August 2012 with an entrepreneurship course sponsored by Gijima and run by Jayshree Naidoo and Associates for all finalists and semi-finalists.



The winning teams

### Creating an apps development community

Students who participated in the Code Jam will now be part of the Western Cape e-Skills Hub and continue developing mobile

### The winning applications

Following are the winning teams and their applications:

- First place went to **MiSHIFTS**. This application allows an organisation to improve its employer-to-employee relationships where employees access work schedules digitally instead of on paper. It also reduces the organisation's carbon footprint. The team included: Motse Lehata, Faize Adams, Kurt Jacobs and Warren Jacobus.
- Second place went to **iSystem**. This cost-effective business tool provides drill-down reports for managers in terms of the sales, targets, production costs, inventory, etc, enabling them to make informed business decisions in less than three clicks. The team included: Darryn Smith, Israr Mohamed, Frederick Ishimwe and Denisha Anand.
- Third place went to **i\_Informall** which helps shoppers find malls and locate anything within a mall, including stores, sales, the nearest toilets, and their car in the car park. The team included: Nic Khoele, Adan Patience, Conal De Costa and Joshua Morat.
- Fourth place went to **iSTUDENT**, a discussion portal with students grouped into categories based on what they are studying. This was developed by Chad Williams.
- Fifth place went to **iOffice**, a mini 'Facebook' that manages employee leave. Employees can apply for leave and managers can see a leave summary (how days are being used and for what reasons) and send messages to employees. This was developed by Chiunde Mwanza.

## ICT for social change and common good

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The world of ICT developers, and mobile app development in particular, has evolved into a lightning fast environment that incorporates social change and working for the common good. It's an environment that captures the spirit and mindset of global youth but more has to be done to promote this aspect within South Africa. This has the potential to increase the pool of mobile app developers within the country, encouraging the development of apps for social good.

### Developing collaborations

The Gauteng e-Skills Knowledge Production and Coordination Hub, based at the University of Pretoria, will be collaborating with Jabu Mtsweni from UNISA.

Mr Mtsweni is experienced in mobile app development and well connected in the mobile apps developer community, particularly within Random Hacks of Kindness

([www.rhok.org](http://www.rhok.org)) and the 'Hacking for Humanity' movement.

Random Hacks of Kindness is a global community of innovators building practical open technology to make the world a better place.



### Hackathon for creative industries and positive social change

The first collaboration will be a workshop on appropriate technology incorporating a hackathon. This will take place from mid-October to mid-November 2012. The event is part of the Gauteng e-Skills Hub's core focus activities and will provide an opportunity to introduce apps development within the creative industries.

## Towards developing a framework for e-voting within e-democracy



Globally countries are experimenting with electronic voting (e-voting). Currently there are no African countries that have taken this technological leap, although a number are undertaking research studies on the subject. Nigeria, as the largest democracy in Africa, is

part of the group that is seriously considering a move in the e-voting direction. Other African countries include Ghana, Kenya and South Africa.

Part of the e-skills agenda is contributing to a body of knowledge both nationally, on the African continent and globally. The KwaZulu-Natal e-Skills Knowledge Production and Coordination Hub's core focus is the e-enablement of government, with e-democracy as a subset of the e-government theme. (The hub is based at the Durban University of Technology.)

Within this context, the KZN e-skills hub will represent

the e-Skills Institute at the first National Information Security Conference, held in Nigeria on 10 and 11 October 2012 ([www.infosecdigest.com](http://www.infosecdigest.com)). The theme for the conference is 'Enhancing National Security and Information Technology Infrastructure through Global Best Practices'.

### Developing an e-voting framework

The KZN hub will present on 'Electronic voting infrastructures, security policies and its impact on national democratic dynamics - lessons for Africa from international experiences'. The paper will contribute to the collective knowledge on e-voting. For electronic voting to be implemented, several simultaneous factors need to be satisfied: electoral trust, the legislative framework, an appropriate robust and secure network with the associated infrastructure, and civil society buy-in. The paper focuses on how this framework can be achieved within emerging democracies.

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**Don't forget to register for the Global ICT forum  
on Human Capital Development  
and the second e-Skills Summit of South Africa**

**22-25 October 2012  
Cape Town**

#### How to register

South African delegates to go to [www.itu.int/net3/ITU-D/meetings/registration/?eventid=4000134](http://www.itu.int/net3/ITU-D/meetings/registration/?eventid=4000134)  
and to use the following to register: Username: 1102979 Password: Nykolay

International delegates to go to <http://academy.itu.int/> to register.

## Towards economic growth and developing e-entrepreneurs

According to The Economist, in 2002 Kenya's exports of technology-related services were \$16m. By 2010 it had exploded to \$360m and much of this can be attributed to products and services for mobile phones. On a similar note, the Apple App store, which opened in 2008, now contains more than 600,000 approved apps, showing exponential growth in the applications development market.

The global market for developers is growing and South Africa needs to play within the space – ensuring the necessary e-skills development that will contribute to economic growth and the development of e-entrepreneurs. The e-Skills Institute's (e-SI) innovation application factories have been created to develop these opportunities.

Innovation application factories are associated with the provincial e-skills hubs and provide a space for local application development through collaboration with multi-stakeholder partners. They also provide an environment to bring together partners in education, business, civil society and government to share resources that address real problems facing South Africa, as well as a focal point for e-entrepreneurial activity.

### Train the trainer on iOS development

A three-day introductory train-the-trainer course in iOS development was hosted by the Western Cape e-skills knowledge and production hub in partnership with the Core Group, a value-added distributor of Apple products in South Africa. It ran from 14-16 August 2012 at the University of the Western Cape and was facilitated by Professor Shirley Atkinson from Plymouth University, United Kingdom. The course covered key aspects of iOS with the view to create iOS applications for Apple's iPod touch, iPhone and iPad.



Professor Shirley Atkinson from Plymouth University, United Kingdom

Fifteen delegates attended, coming from South African universities and

the e-SI's provincial e-skills knowledge production and coordination hubs: the Eastern Cape e-Skills Hub based at Walter Sisulu University, the Gauteng e-Skills Hub based at the University of Pretoria, the Western Cape e-Skills Hub based at the University of the Western Cape, North West University and the Cape Peninsula University of Technology.

This was the first initiative for the Western Cape e-Skills Hub's innovation application factory in contributing towards local application development skills. A memorandum of understanding was signed with the Core Group in July 2012 to associate with the apps factory and an iOS development lab was consequently created.

### iOS developer university programme

The University of the Western Cape and the Western Cape e-Skills Hub also became a partner in the Apple iOS Developer University Program. This programme is designed for qualified, degree-granting higher education institutions looking to introduce iOS development into their curriculum.



Delegates at the iOS development train-the-trainer course

## ICT trend words – computer literacy and e-literacy

This edition looks at the difference between 'e-literacy' and 'computer literacy'.

### Computer literacy

The definition of computer literacy is widely understood to define the level of expertise and familiarity that someone has with computers. It incorporates the knowledge and ability to use computers and related technology efficiently and covers a range of skills from elementary use to programming and advanced problem solving. Computer literacy generally refers to the ability to use applications rather than to program.

### e-Literacy

e-Literacy is a newer term than computer literacy and

there isn't global acceptance on its precise definition. It changes nuance depending on the field.

A more open definition sees e-literacy as referring to the awareness, skills, understanding and reflective approaches necessary for an individual to operate comfortably in information-rich and ICT-enabled environments (Martin and Ashworth 2004).

Aspects of e-literacy also include the ability and skills needed to make use of new technology opportunities and to become 'learned' as a result of these technologies.

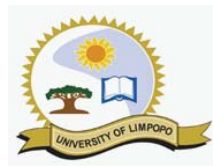
There are cognitive skills involved as well as the mastery of essential tools but e-literacy also involves human and social skills allowing individuals to engage with society using technologies and information channels.



## partners in the Department of Communication's e-Skills Institute multi-stakeholder collaboration



education



government/South Africa



civil society



business



global developmental  
partners

Please note that this list will be extended as there are Memorandums of Understanding in progress across all sectors.

The e-Skills Institute is a national catalyst, facilitator and responsive change agent in the development of SA, within the globally evolving information and knowledge-based environment, by leading the creation of key e-skills development strategy, solutions, practices and the implementation thereof, to benefit the total population. The e-Skills Institute focuses primarily on four components: research, teaching and learning, innovation and a monitoring and evaluation framework.